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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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DEEP WATERWAYS COMMISSION.

George Y. Wisner, of Detroit, and Alfred Noble, of Chicago, member of the United States Board of Engineers, on the Deep Waterways Commission, have just returned from a tour of inspection in the east. They have been examining into the character of the soil along the different routes surveyed for the deep waterways canal, and the result of their examination will be used in estimating the probable expense of excavating and constructing a canal over each of the proposed routes. The route which is found to offer the strongest inducement in the way of economy in excavating will doubtless be selected. The calculations are based on samples of the underlying strata, obtained by borings made at different points along the routes laid out.

The preliminary work of surveying has been completed and it is now necessary to get these samples showing the nature of the ground along the proposed routes. Some of this work was done last fall, but stopped when the ground froze up.

It will be several months yet before the commission is ready to submit its report. Mr. Wisner hopes to have it ready by the time the next Congress convenes in December.

During his recent visit east he visited Valleyfield, Ont., Rouse's point, Albany, and other points along the Hudson river. In some sections along the Hudson river he found shale which could be excavated at a cost of perhaps 50 cents per yard. At other points the route was over quartz rock which it would probably cost \$2 or \$3 per yard to excavate.

CANADIAN HARBOR IMPROVEMENTS.

Very little is heard of or known at U. S. lake ports regarding the improvements authorized by the Dominion parliament in the conservancy and improvement of their rivers and harbors, although we have evidence enough of their canal projects. We herewith append the estimates for public works this year in the province of Ontario with which we have most to do relative to lake commerce:

Bowmanville harbor, \$5,000; Bruce Mines wharf, \$10,000; Burlington channel, repairs to piers, \$40,000; Collingwood harbor, \$60,000; Goderich, reconstruction of breakwater, \$46,500; Goderich, dredging, \$20,000; Hawkesbury, dredging, \$3,000; Kincardine, repairs to pier and dredging, \$1,500; Kingston harbor and dredging, \$10,000; Little Bear Creek, dredging, \$2,000; North Bay, pile wharf, \$8,000; Oakville, repairs to piers and dredging, \$45,000; Oshawa, repairs to piers, providing harbor is transferred to municipal corporation, who will maintain it in future, \$8,000, revote; Owen Sound, dredging and pile work, \$19,600; Picton, dredging,

\$5,000; Port Burwell harbor, \$45,000; Port Elgin, construction of groyne, \$5,000; Port Hope, repairs to pier and dredging, \$25,000; Port Stanley, repairs to pier and dredging, \$13,000; Rainy river, improvements to channel, \$1,500; river Ottawa, improvements steamboat channel, \$7,200; Saugeen river, dredging, \$3,100; Southampton, dredging, \$2,000; Sydenham river, dredging, \$5,000; Thornbury, dredging, \$3,000; Toronto harbor, works at eastern entrance, etc., \$75,000.

NOTICE TO MARINERS.

DOMINION OF CANADA, ONTARIO.

GEORGIAN BAY AND NORTH CHANNEL PILOT, 1899.—A new and complete addition of the Georgian Bay and North Channel Pilot has been published for use in connection with the sheet charts containing the results of the recent surveys of those waters, by Staff-Commander J. J. Boulton, R. N., and Mr. W. J. Stewart.

Copies of the Pilot can be obtained from the Department of Marine and Fisheries, Ottawa, from the collectors of customs at the principal lake ports, and from the admiralty chart agent, Mr. C. Potter, 31 King street East, Toronto.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

Department of Marine and Fisheries,
Ottawa, Canada, April 26, 1899.

LAKE ERIE—CANADA—OFF TALBOT POINT—CONDITION OF THE CROTON WRECK.—Mr. M. Payne, sub-collector of customs at Port Stanley, Ontario, has furnished the following information, under date of April 26, 1899, relating to the wreck of the Croton off Talbot point:

Captains of vessels trading up and down this shore report the masts of the wrecked schooner Croton are still visible for a few feet above the water. The wreck is very dangerous to navigation during the night or in foggy weather, as the masts cannot be seen until close aboard.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—WISCONSIN.

TREASURY DEPARTMENT.
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., May 8, 1899.

MILWAUKEE BREAKWATER LIGHT STATION.—Notice is hereby given that, on or about May 15, 1899, two fixed lantern lights, red vertically above white, will be established at the southerly end of Milwaukee breakwater, Milwaukee Bay, westerly side of Lake Michigan.

The lights will be suspended from a brown iron post, 29 and 22 feet respectively above mean lake level.

By order of the Light-House Board:

FRANCIS J. HIGGINSON,
Rear Admiral, U. S. Navy, Chairman.
UNITED STATES ENGINEER OFFICE,
DULUTH, MINN., May 1, 1899.

During the next two years dredging and pier building will be going on in the Duluth ship canal entrance to the Duluth-Superior harbor. Under Section 4, of the Act of Congress of August 18, 1894, all vessels, until further notice, are required to slow down to six miles an hour when within five hundred feet of either entrance of the ship canal, and not to exceed that speed from that point until they have passed five hundred feet beyond the other entrance. This irrespective of whether a red flag or lantern be shown or not. Violation of this rule is a misdemeanor, punishable by a fine not to exceed \$500, or by imprisonment not to exceed six months.

Vessel masters are also specially enjoined to exercise great care in passing through the canal, that they do not come in collision with dredges, scows, or mooring piles, or the false work to the new piers.

CLINTON B. SEARS,
Major, Corps of Engineers, U. S. A.

CHICAGO LAKE COMMERCE.

The importance of Chicago river was most strikingly shown by Congressman Foss of that city, in a speech before the Union League Club, on the "Needs of Chicago." In speaking of the necessity of lowering the tunnels which prevent the deepening of the river and of doing away with the thirty-odd grade bridges which now obstruct navigation there, the Congressman gave these figures and comparisons to illustrate the magnitude of the interests involved:

The importance of the Chicago river is evident to us all. In all the history of our city from early time when Chicago consisted of only an old Indian fort, one house and a Canadian settler, down to the present time, when its population has increased to 2,000,000 people and its interests have grown a million fold, the Chicago river has been the main artery of its life and activity. While it lies within the limits of this great municipality, yet the commerce which floats upon its bosom belongs to the nation. It has more than forty miles of dock frontage, the elevators along its banks have a capacity of 40,000,000 bushels, and railroads with 80,000 miles of track have terminals along its course.

During the year 1898 the arrivals of vessels in the Chicago district amounted to 9,428, with tonnage of 7,557,215, and the number of clearances, 9,562, with tonnage of 7,686,448, making a total of arrivals and clearances of 18,990, with a total tonnage of 15,243,663. This was a larger number of vessels than entered and cleared from the port of New York by nearly 5,000. The shipments of grain of all kinds from the district of Chicago in 1898 amounted to 165,885,162 bushels, and under the head of merchandise the shipments via the Chicago river numbered 3,353,953 packages. These figures in a general way give the immense amount of business which is done upon the Chicago river and show its importance not only to the city but to the country at large.

In view of the importance of this stream, which, as Major Marshall said, is the "most important navigable stream of its length on the globe," which is subject to the jurisdiction of the Congress of the United States under the power vested in the federal constitution to regulate commerce, it is its duty to improve the river, to deepen it, to widen it, to straighten it, and to give it that measure of consideration which it is justly entitled to, and I say here and now that if the federal government should deepen it not only to twenty-one feet, but to thirty-one feet, it would not do more than it has done for harbors of one-tenth its importance and of one-tenth its commerce.

SHIPBUILDING AT PHILADELPHIA.

Activity at Philadelphia shipbuilding plants continues with every sign of a brisk continuance. The fact that the Cramps have decided to establish a new dry dock to be used almost exclusively in repair work shows the magnitude of present operations in this important branch of industry. The above firm is now building for home and foreign use three battleships, one steamship for the Ward line, one for the Plant system, one cruiser for Russia, and three steamships for the new Oceanic line. Contracts placed at Hillman's before the recent assignment are being completed, and include a tug for the Staples Coal Co., and two barges for the American Gold Dredging Co. Neafie & Levy are at work on four tugs, three torpedo boat destroyers for the use of the United States Navy, and one fine steamer for the York river line. The Cramps' yard has its full complement of 7,892 men steadily employed, and in addition to the new vessels in course of construction, the Hillman yard, which it is rumored will soon pass into the hands of a syndicate, is rebuilding three steamers, formerly used on the lakes and brought to the coast via the St. Lawrence system of canals.

NEWS AROUND THE LAKES.

BUFFALO.

Special Correspondence to The Marine Record.

Even if there was no strike on here, the Erie canal traffic has been knocked out for at least a week owing to a break or cave-in at Shreveport.

On ore from Escanaba to this port 55 cents is offered this week, an advance of 5 cents since the opening of navigation. Coal shippers are refusing to pay 40 cents to Lake Michigan, but are getting no vessels at 30.

Announcement is made by Manager John Foy, of the Niagara River Line, that the first trip of the season will be made by the steamer Chicora Monday, May 15, leaving Toronto 7 a. m., and on return trip leave Queenstown 10 a. m.

The Western Elevating Association has made public the following comparative statement of the amount of grain handled here from May 1 to 8 inclusive, last year and this year, as follows: 1899, 6,580,839 bushels; 1898, 6,425,243 bushels; increase this year, 155,596 bushels.

Capt. James Delaney, St. Catherine's, Ont., is one of the best known and most expert pilots from Lake Erie to Montreal that is known in this vicinity, and he makes a specialty of the route, although he is equally well posted and duly qualified as master or pilot from Duluth or Chicago to the St. Lawrence river.

The superintendent of the 9th life-saving district, E. E. Chapman, when recently called upon for a report of the stations under his supervision, was more than fulsome in his reply to the superintendent of the service and avowed that everything, including his human charges, worked like a charm. Mr. Chapman protests too much apparently.

The schooners Foster, of Cleveland, Iago of Buffalo, Owen, of Fairport, and Shawnee, of Marine City, all about 800 tons burden, chartered to the Atlantic Transportation Co., New York, and sent to the ocean last fall for coast trade, are coming back to the upper lakes. The McGregor, Wall and others will also return and go back into the coal and ore trade.

Capt. Alexander Clark, founder of the Shipmasters' Association and for some seasons master of the steamer Robert Mills, has retired from the management of the Buffalo Ship Chandlery and Supply Co., of which he has been the manager since it was made a corporate concern. He retains his interest in it, but the management goes to Capt. Hiram H. Smith, who has been connected with the establishment for two seasons. Capt. Clark, who is senior member of the vessel agency of A. Clark & Co., will now assist Capt. John Hall in the management of that business.

Shippers have concluded that coal must go forward to Lake Michigan, and a 50 cent rate was offered on Wednesday. This is an advance of 20 cents on opening rates. The flurry will soon pass over now that the grain shoveling row is settled, and it is expected that a slump will take place with the rapid discharge of the grain boats, together with the large incoming fleet, as return cargoes are sure to be looked for, but it will take a couple of weeks to get the grain fleet in working order again, and by that time the 50 cent coal rate may have become fixed, for a time anyway.

The Cleveland delegation of the Lake Carriers' Association that came here to settle the grain shovellers' strike, have been and come and gone, leaving matters in much the same shape as when they reached here. Mr. Connors is quoted as saying that he will never bid on the grain discharging contract again, and there is quite a feeling to the effect that he had been all along trying to keep on the right side, financially, of his contract. It is certain, however, that Mr. Connors never took the contract out of loving regard, brotherly affection or business friendship towards vessel owners, nor even for the good of his health. Then what?

In addition to his duties as inspector for Inland Lloyd's, Capt. T. Donnelly, Kingston, Ont., has accepted the position as marine inspector for the Western and British-American Assurance Companies. From his long experience in surveying and in handling damaged vessels, it is considered by marine men that the companies have secured the services of a most competent inspector, through whom they will derive considerable benefit. His duties consist in inspecting hulls and cargoes damaged by accident on which the companies hold risks, with a view to salvaging property. Capt. Donnelly is held in high esteem by marine men on both sides of the lakes. The several brothers of Capt. D. are expert and active men in the marine community of the province of Ontario.

THE American Wrecking and Salvage Co. will resume the work of removing copper from the wreck of the steamer Pewabic in Thunder Bay about May 15. The steamer H. A. Root, which has been engaged on the Pewabic for several seasons, is now at Saugatuck and will go to Milwaukee in a few days, where Capt. Brittain will take aboard a Smith diving bell. There are 100 tons of copper still aboard the Pewabic. The entire deck has been blown off by dynamite, and the copper is all laid bare. There is one piece in the wreck weighing nine tons which the company expects to lift this summer. The fact that the price of copper has doubled since the work was begun is an added incentive to the work of removing the Pewabic's cargo this season.

DETROIT.

Special Correspondence to The Marine Record.

Mr. C. F. Bielman has secured the contract for delivering mail at Detroit for four years. He has chartered the Florence B to the postal authorities at the rate of \$18 per day while in actual service.

After passing an examination by the local inspectors, the passenger steamer State of Michigan goes on the route this week between Cleveland and Mackinac. It is likely that she will pick up a fair patronage.

The Empire State and Badger State are about ready to go on the route between this port, Toledo, Cleveland and Ogdensburg, calling at Toronto, Oswego and Alexandria Bay. The steamers have been put in first class shape for the season's work, and large passenger lists are already booked ahead.

Bids are asked for the hull of the burned steamer Aurora, now lying at the foot of Twenty-fourth street. The Aurora was burnt to the water's edge, but her bottom is in good condition and it is well known that she was formerly one of the most powerful, strongest and best built wooden boats on the lakes.

Suits have been started by the Vulcan Transportation Co. and the Parker Transportation Co., of Detroit, to recover insurance on the barges H. H. Brown and San Diego, respectfully, which were chartered to the Atlantic Transportation Co. last year and later were wrecked. The policies were both written by the Aetna Insurance Co.—\$1,000 on the Brown and \$1,200 on the San Diego.

E. A. Davis has abandoned his scheme for a fast side-wheel steamer line between Detroit and Buffalo. Premature publicity is said to have been the cause of the failure of his plans. Mr. Davies prophesies that two years hence the line will be in existence, though he does not state by whom it will be built. It will be remembered that a Cleveland paper had stock subscribed and builder's figures made out on plans and specifications, but that was easily known to be bosh.

The Lake Carriers' Association has made arrangements with Duff & Gathfield for the reporting by them of the changes in the depth of water at the Limekiln Crossing. These reports will be shown from the coal docks of Stanley B. Smith and the Cuddy-Mullen Co. Upon the receipt of such information these docks will show the depth in feet and inches, as reported, using large numerals by day, and the same will be illuminated by night. These can be seen at a distance of over one mile. The signals will be maintained by the respective coal docks, and no charge made to the Lake Carriers' Association.

Mr. Wisner is a lawyer, also an engineer, and a retired naval officer, but there are still some points of law that are not "up his sleeve." He fitted out the schooner Marengo, at Windsor, brought her across the river, and is now called upon to pay duty on the new work, outfit equipment, etc., he will have to pay it too, as there will be no begging off with the Secretary of the Treasury on a deal of this kind. On the other hand H. C. Wisner says that he was perfectly familiar with the law governing the duty of vessels fitted out in a foreign country, and that when he brought the schooner Marengo to Detroit last Saturday he voluntarily paid the duty, with the expectation that the amount would be refunded when the Treasury Department was acquainted with the facts. He hired all his labor on this side and purchased the most of the material here. When the job was completed an inventory was taken of everything and embodied in a report to the United States appraiser. Collector Rich imposed the duty as a matter of form merely, as Mr. Wisner had already paid the Canadian duty on the material imported from this side. The Marengo was fitted out in Windsor, Mr. Wisner says, because he had more room there and better facilities. About \$3,000 was expended in the improvements, and the vessel will receive the finishing touches at the Clark dry dock.

Detroit vessel owners are greatly interested in the situation between the striking grain scoopers and Contractor W. J. Connors at Buffalo. Though there is a general expression of sympathy for the men who have been subjected to such abuses of the system as the regulation concerning the saloon bosses, there is also a feeling that repudiation of the contract with W. J. Connors is not to be thought of for a moment. C. A. Waldo believes that the trouble has only just begun. "It has got to come to a show down between the men and the contractors," said he. "If I can ever get my boat, the Waldo, out of Buffalo I shall run no more risks, because I shall put them immediately into the ore trade. With the strikers, it seems to be a question of the contract being abolished or nothing. Now it is, to my idea, out of the question that the Lake Carriers should attempt to enter into a contract with 2,000 men directly. Connors seems to be the only man who has the stamina to stand up against the scoopers and carry out his contract; therefore, the only thing to do is to stick by Connors to the end." Other owners express similar opinions and so it looks like war to the knife on the question of a responsible contractor. It has now gone beyond wages, system or price paid for the labor. The fight is against the contractor and there is no doubt but that he has an obstinate, determined set of men to deal with, consequently the result is not yet in sight. It can't be doubted, though, that if the Lake Carriers' Association desire to hold to contractor Connors he will win out in the close.

CHICAGO.

Special Correspondence to The Marine Record.

Two charters for corn were placed on Monday to Erie and Fairport at 1½ cents.

Mr. James A. Myers, for the past 25 years connected with the firm of Messrs C. Elphicke & Co., is now in the vessel brokerage and insurance business on his own account with offices at 414 Royal Insurance building.

The enlarged dry dock at South Chicago will be 530 feet in length, 510 feet on keel blocks and 70 feet in width at the gates. This will permit the Chicago Ship Building Co. to dock anything that can be put afloat on the lakes for the next decade or two at least, after that?

There has been all week a good deal of grain on the market for Buffalo, but the unfavorable reports from the strike at that port kept vesselmen from sending their boats there. Rates hold at 1½ cents on corn, and although an attempt has been made it was not found possible to screw them up a notch higher.

Mr. Ed. E. Ayer, the cedar king, has sold his last two vessels, the steamer Sachem, for \$30,000, and schooner City of Toledo, for \$3,000, to the Mitchell & Rowland Lumber Co., Toledo. Capt. Ledden, of the Sachem, will remain in her and probably move his home to Toledo. He has sailed for Mr. Ayer for about 22 years.

The steamer W. L. Frost, first boat of the Ogdensburg line left here on Wednesday. Three other steamers of the line will follow this week. The boats will continue to form the western connection of the Central railroad of Vermont. At least, so it is now understood, probably on account of the other arrangements having temporarily fallen through.

There is a constant change of ownership of vessels as well as of masters and engineers going on throughout the season of navigation, so that nothing less than a weekly supplement noting such changes could keep any list posted up or anything like correct. There has been made already this season about a hundred or two changes in the appointments as given out just previous to the opening of navigation and others are taking place daily.

It is now reported that W. I. Babcock, general manager of the Chicago Ship Building Co., will be continued in that position permanently by the shipbuilding trust, which recently took control of the Chicago ship yard. Mr. Babcock has been with the Chicago Ship Building Co. since its opening and his management has had a great deal to do with its success. His consent to remain in charge here gives much satisfaction to Chicago vesselmen.

The Fleming line of steamers has been formed to take the place of the Owen line, which ran last season between Chicago and Fairport in connection with the B. & O. railroad. The steamers Escanaba, B. W. Blanchard and Mary H. Boyce will form the new line, of which F. H. Fleming is general manager and O. G. Orr is assistant manager. The name of the Escanaba will be changed to Baltimore. The line makes an important connection with the seaboard.

The Chicago Pneumatic Tool Co. has purchased the patents formerly owned by the Consolidated Pneumatic Tool Co., now defunct. These patents include all the Keller and Wolstencroft types of tool construction, and in addition several new applications which have not yet been taken out. These patents originally cost the Consolidated Pneumatic Tool Co. about \$40,000 and in purchasing them the Chicago Pneumatic Tool Co. acquires control of about all of the pneumatic tool patents of value in existence.

Extensive repairs and changes have been made in the Goodrich line fleet of steamers. The Indiana, on the route between Chicago and Muskegon, will attract particular attention, having had about 54 staterooms added to her former capacity. The joiner work done at the shops of the company, at Manitowoc, is in the highest style of workmanship. Some very small details will serve to point out the attention given these steamers; as, for instance, special facilities have been given to passengers for reaching all upper berths, a feature otherwise neglected by all steamship lines.

Word has been received that the Rival had driven ashore near Sheboygan, and was badly damaged. The steam yacht Rival was recently purchased by A. W. Goodrich, president of the Goodrich Transportation Co. Capt. Bronson fitted her out and started from St. Joseph, Mich., for Mackinac Island a few days ago. On Wednesday morning, while steaming northward in a fog, the machinery broke down. The yacht was then five miles off Sheboygan. The heavy sea set the helpless craft toward the beach. Capt. Bronson says he could not hear the fog signal, though there is nothing mentioned about the yacht's ground tackle.

The marine insurance situation has not been cleared up as it was hoped it would be. All efforts to have the insurance companies shade the rates have proven futile, and a number of vessel owners have about decided they will either have to pay the rates or let their boats go without being uncovered. Owing to the advanced rates this year most of them have been compelled to adopt the last named course. The small fry or tonnage on the second letter, including a large wooden fleet are not in it all. They also say that the heaviest losses for the past several seasons has been among the big steel steamers and not on the medium sized wooden or steel vessels. It is not unlikely that a club for mutual marine insurance will be formed before the opening of another season.

CLEVELAND.

Special Correspondence to The Marine Record.

The few lake-built craft that are in the coast trade are reported as earning good dividends.

The passenger steamer State of Michigan will be placed on the route between this port and Mackinac.

A prominent vessel owner views with some alarm the combination of freight handlers at lake ports. Organizers, he says, organize and then bring about labor troubles to hold their jobs.

Daily trips to Put-in-Bay and Lakeside, from Cleveland and Toledo, will be operated from June 10th to September 10th, jointly by the D. & C. Navigation Co. and the C. & B. Transit Co.

Coal rates advanced from 30 to 40 cents this week to Milwaukee. The 30 cent rate is still offered to the head of the lakes with but very light chartering, as 35 cents to 40 cents is wanted and should be obtained.

A dredge has now cleared the bar, so that Fairport is ready to do business. The docks are cleared up in better shape than they have been for years, and the largest imports in the port's history will be done this season.

Capt. E. E. Chapman, of Buffalo and Capt. Rodgers, of Detroit, officials in the life-saving department of the lakes, were in the city this week regarding the work that is soon to be started on the new life-saving station.

Mr. Frederick Whittlesey, late son-in-law of Robert Wallace, of the Cleveland Ship Building Co., died this week from heart disease. Mr. Whittlesey was well known in local business circles and was highly respected.

The steel steamer M. A. Hanna, built by the Globe Iron Works Co., has been assigned an official number by the Bureau of Navigation, Treasury Department, Washington, D. C. Her tonnage is 4,661 gross or 3,116 tons net, port of hail, Cleveland.

Col. Jared A. Smith, Corps of Engineers, U. S. A., has intimated to bidders that they must figure closely on the new work at this harbor, otherwise the work will be carried out under his personal direction and supervision instead of by contract.

The new steel steamer M. A. Hanna is now loading her first cargo at Duluth at the rate of 2 3/4 cents on wheat. She will load to a safe draft through the rivers but the cargo will not show her dead weight ability. The Mitchell Co. have one of the latest and best steel cargo boats in the Hanna.

The many friends of Mr. Wm. M. Fitch, secretary of the Cleveland Ship Building Co., will be pleased to learn that he had so far recovered from his recent accident, wherein he was injured by a street car, as to be around at his desk again on Wednesday morning. Of course Mr. Fitch made no pretense of transacting any business, but it was very pleasant for his friends to see that his health was so far improved as even to permit his leaving home.

The steamer Eureka, under construction at the Lorain yards of the Cleveland Ship Building Co., will be completed and ready for launching on next Saturday afternoon. Her length is 252 feet over all, 238 feet between perpendiculars. The molded depth is 42 feet, beam 26 feet 6 inches. She will have two Scotch type boilers of 11 feet diameter, 170 pounds steam pressure. The engines are triple expansion with 18 1/2, 31 1/2, and 51 1/2 inch cylinders and a 36 inch stroke. The boat is for the Eureka Transportation Co., of Cleveland.

A contract for a steel steamer of Welland canal size has been closed by Arthur H. Hawgood of this city and others with the Craig Ship Building Co. of Toledo. The machinery and fit out will be suitable for coast work. The new boat will be completed and ready for business November 1. She will be sent to the coast. The steel steamer Eureka, which will be launched at Lorain Saturday will also be sent to the coast next fall. She is building for the Eureka Transportation Co., which was recently organized by W. A. Hawgood of this port.

A leading coal shipper stated this week that he has used the Lake Carriers' bill of lading on every cargo he has sent forward this season. "All our agents have been instructed to use the new form," he said, "but to make it a success, all the members of the Lake Carriers' Association must insist on it being used. We are in favor of this new plan, but unless it is used by all shippers we will have to drop it and go back to the old form." Coal men are not making any great kick against the new bill of lading, but some of the vesselmen are indifferent about the matter when chartering.

The steamers of the Western Transit Co., Empire State and Badger State, Farassey & Marron, River street, general agents, have been refitted for the season and will be placed on the route between Detroit, Toledo and this port with the eastern terminal at Ogdensburg, calling en route at Toronto, Oswego and Alexandria Bay. This line met with exceptional patronage last season in both the freight and passenger trade and it was thought probable that one, if not two more boats would be added this season; however, a good list of passengers have been booked for various dates through the season and a brisk business is already assured. Attention now seems to be directed toward lower lake travel, Thousand Islands and St. Lawrence river way. Mackinac appears to have been somewhat overdone of late years.

Mr. J. C. Gilchrist received a telegram from Buffalo on Wednesday stating that the grain shovellers' strike was practically settled. A prominent member of the committee that visited Buffalo stated that the association would hold strictly

to their contract with Mr. Connors and that every means would be taken to eradicate the evils which have sprung up in the grain shoveling work, as disclosed by the investigations of the committee, and that a special agent would be appointed for this purpose. Another member stated that Mr. Connors would be held to his contract for this year, but that an arbitration board would be appointed to take up any question of differences that might arise during the season. From other sources it is learned that grain discharging will be at full swing in Buffalo in the course of a day or two.

The Cleveland and Buffalo Transit Co. and the Detroit and Cleveland Navigation Co. announce that jointly they will open a new route in a few days. This will be known as the Sandusky and Lakeside division, and will be operated by boats running to these points on Tuesdays, Thursdays and Sundays. The State of Ohio, the State of New York and the City of the Straits will be used in this work. The boats will leave here at 8 a. m. and will arrive in Sandusky at noon, will leave there ten minutes later and arrive in Lakeside at 1 p. m. They will leave Lakeside returning at 3 p. m., and will reach Sandusky at 3:45 p. m., arriving in Cleveland at 8 p. m. They also announce in connection with this that arrangements have been made with the Cedar Point line whereby the boats connect direct with the Sandusky division boats at Lakeside.

ESCANABA.

Special Correspondence to The Marine Record.

Light-house tender Dahlia set the gas buoys here this week.

Inspectors were at Green Bay last week, and inspected the Hart Line steamers.

The steamer Waverly was towed down by the steamer Schuck last week, being slightly disabled.

The side wheeler Sheboygan, of the Goodrich Line, opened the Chicago-Escanaba route the latter part of last week.

The tug Claude, of Green Bay, arrived Monday with a scow after a load of pulpwood to be taken to Appleton, Wis.

The steamer Petoskey, purchased by the Hart Steamboat Line last winter, will be delivered to her new owners about June 1.

The steamer Eugene C. Hart, of Green Bay, was the first Green Bay-Mackinac, boat to stop at this port. She arrived Friday morning.

United States Government inspectors of steamboats, for the district of Marquette, C. M. Gooding and Charles M. York, were in the city inspecting the wrecking tug Monarch.

The wreckage of the Big Bay De Noquet Lumber Co.'s mill, which recently burned at Nahma, has been sold to a Chicago firm of junk dealers, and will be taken to the latter place on scows.

Capt. W. H. Van Dyke, of Chicago, has purchased the little steamer Imperial, of Green Bay, and has taken her to Chicago to be used in the fruit trade between Chicago and Pentwater, Mich.

If the number of boats that have been using their own crews for trimming, or not trimming at all keeps on increasing as it has in the past, the ore trimming occupation will soon be a thing of the past.

There was considerable discussion here as to the amount of ore there would be shipped from this port before navigation closes for '99, some figuring up to the 5,000,000 ton mark. If 4,250,000 tons are shipped from here, it would take some tall running and carrying as the days cut quite a figure in the length of a season, and the fact that the insurance companies have taken a slice off last end of the season, it hardly seems possible to beat last year's record; but while things are moving it is expected to be the busiest season known here in years.

While bound out Friday morning the steamer Ionia went ashore near Poverty Passage. The wrecker Monarch with a crew of men succeeded in getting her off after lightering about 75 tons of ore. The Ionia returned to the port Saturday morning for an examination of her bottom. It was found that part of the forefoot was gone, a plank forward loosened up enough to cause a slow leak, and about half the length of the bottom slivered up. Diver put a patch on her and she left again for Lake Erie ports Sunday night. Mr. C. H. Sinclair, of Chicago, representing the underwriters, arrived here Saturday morning and took charge of the examination and repairs.

Presumption of Seaworthiness.—A steel steamship was of first-class construction and rating. She was new and had been thoroughly surveyed by the Lloyds within a year preceding the voyage in question. She had thereafter made a number of voyages without injury, and two weeks after she entered upon that voyage she was uninjured. After that the testimony of the crew showed she encountered the worst weather they ever experienced and she received much injury. During such time one of the rivets fastening the steel plates to the frame of the hull broke, and sea water entered through the space and damaged the cargo. It was shown that the holes through the plate and the frame were not exactly true, and that, in driving the rivet while hot, it had received a cant which perhaps weakened it somewhat, but not to any substantial extent. Held, that such facts were insufficient to raise a presumption of unseaworthiness at the inception of the voyage. The Sandfield, 92 Fed. Rep. (U. S.) 663.

FLOTSAM, JETSAM AND LAGAN.

Capt. Laughlin, of the schooner H. W. Sage, has left for Valleyfield, where the vessel is wintering on the St. Lawrence, to bring her back.

The steamer Fayette has been sold by W. H. Horn, of Arthur Bay, Mich., to Dan McMillan and others, of Muskegon; consideration, \$6,500.

No more Sunday work by the longshoremen at Saginaw. The police there, on complaint of the union, stopped work on the steamer Miami Sunday last.

A Sunderland shipbuilding firm has just placed an order with the Penn Steel Casting Co., of Pennsylvania, for a patent steel rudder, cast all in a piece, which it is intended to fit to a Wear-built ship.

Fred Bauchemin, engineer of the dredging tug Williams, fell into the pocket of a dump scow at Duluth, this week, and struck on his head. He was instantly killed. He had been in the employ of E. T. Williams for thirty years.

At one time, not so many years ago either, the Cass river was one of the greatest logging streams in Michigan, but the days of its grandeur in that line have departed. What is said to be the last drive of logs that will ever be sent down the stream, went down last week.—Pioneer, Alpena, Mich.

The directory of the American Association of Masters and Pilots of Steam Vessels of the Great Lakes for the year 1899 has made its appearance. It is a very handsome book. The covers are in blue and gold. It was got out conjointly by Toledo harbor No. 43 and Buffalo harbor. It contains a great deal of information interesting to marine men as well as others.

There is very little doing in Duluth grain charters owing to the strike and consequent detention at Buffalo. The nominal rates are 2 3/8 cents on corn and 2 1/2 cents on wheat, but no vessel is going to charter in the face of the grain shovellers strike, although it is generally believed that a few more days will see some sort of a mutual arrangement made for discharging cargoes of grain.

Capt. James Davidson will fit out an expedition to release the steel steamer Harlem, stranded on Isle Royale, if her condition in any way warrants the attempt. Up to the present it is not known what shape she is in as passing vessels have not sighted or reported anything about her. The last heard or known regarding her, the hull was solidly embedded in heavy ice and it was thought that she would break in pieces when the ice thawed out, especially if there was any heavy weather at that time.

Supervising Inspector of Steam Vessels Birmingham, at San Francisco, has reduced the sentence upon First Mate Douglass, of the ferry steamer Oakland, from twelve to four months. Douglass was sentenced by the local inspectors for negligence in connection with the recent collision between the Oakland and the gasoline launch William D. Birmingham ruled that Douglass was not much more responsible than Captain Clairville of the Oakland, whose license was suspended for only three months.

Burger & Burger have purchased five-sixths of the schooner Minnie Slausen from John Elsie and Mrs. Louise Perret, of Chicago. The price paid was \$2,400. Burger & Burger have since sold one-sixth to Capt. L. E. Larson (who previously owned one-sixth) for \$480. They have also laid the keel and raised some of the after frames for a small steam barge to be built for Anderson & Dennison of Green Bay, to be used in the Bay lumber trade. The dimensions are, length of keel 80 feet, over all 90 feet, beam 22 feet, depth of hold 7 feet.

The editor of the St. Louis Waterways Journal seems to have struck an extraordinary streak of luck, for he records the receipt of an annual pass, "including meals and drinks," on the steamer Woodruff, which, he says, is the only three-wheel boat on earth—two side and one stern wheel. In addition he says that "on entering the cabin the guests are greeted by the handsome countenance and pleasant smile of Miss E. E. Lynn, the handsome young clerk." And he adds that "although the boat is supplied with three wheels, Capt. J. L. Kilgore, master of the craft, says he will add two more if she does not travel fast enough, and he will make her 'walk the waters like a thing of life.'" Well, if our contemporary doesn't live forever at that rate, he ought to.—Marine Journal, New York.

Plans for spending the \$380,000 which Congress appropriated for the improvement of the St. Joseph harbor are being formed and will be completed within a few days. United States Engineer C. W. H. Smith, in charge of the work, has finished his soundings, and contracts are being let for the work which will take from 18 months to two years to finish. At the end of that time St. Joseph will have a harbor that any vessel on the lakes may enter, and the improvements made along the docks will insure rapid handling of all kinds of cargo. Business men of St. Joseph and Benton Harbor are predicting that the population of the two cities will grow in a few years to 50,000. They hold that the trend of much trade will be in that direction, which can not but build up the ports. With a deep-water harbor that vessels can use at all seasons of the year, and with rail connections to care for the through freight, a great deal of traffic for the seaboard is likely to be sent via St. Joseph. The quick-time lake traffic will find a commodious port for transfer. The Big Four road is beginning dock improvements, which will cost \$50,000, it is said. The four railway lines are to be reinforced by two more, and with the exception of Detroit, it is confidently expected that St. Joseph will become the greatest railroad center in Michigan.

AUTOMATIC STEAM TOWING MACHINE.

ILLUSTRATED.

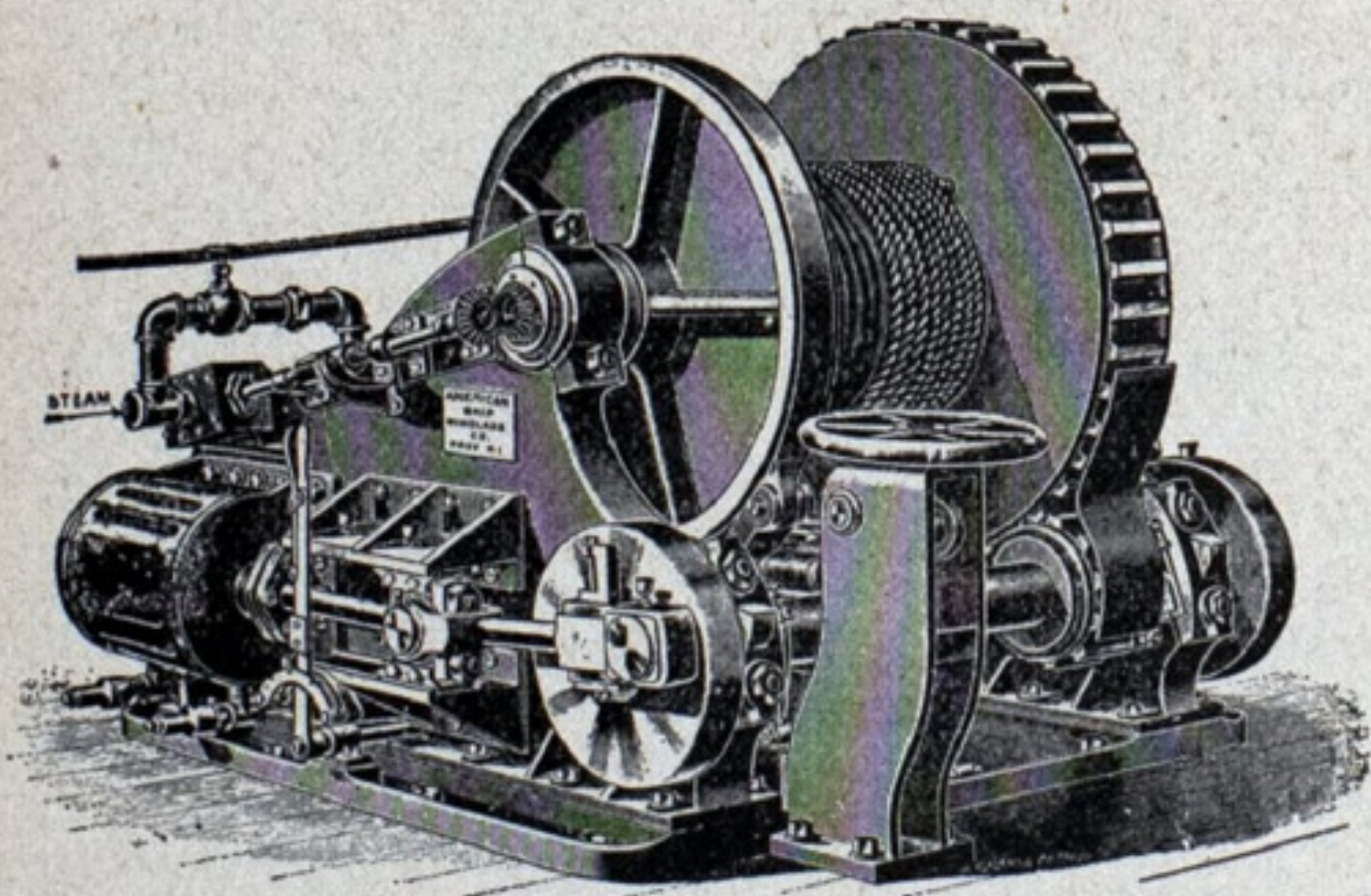
(The Shaw and Spiegle Patent.)

Within the past few years there has been brought into use one of the most advanced appliances ever fitted on board a vessel. We refer to the automatic steam towing machine, patented by Shaw & Spiegle and manufactured by the American Ship Windlass Co., Providence, R. I.

At frequent intervals reports come in of steamers which are taken in tow in a disabled condition, being eventually abandoned on account of hawsers parting and towing being impossible. These casualties might have been avoided by the use of this towing machine, and it ought to be a remunerative investment in the equipment of ocean steamships. The day is not far distant when this machine will be an important part of the outfit of every first-class ocean steamship, and we may instance that the salvage gained by the saving of one ship would pay for many of these machines.

The principle and mode of working the towing machine is in the circumstance that the resistance of the tow barge is borne entirely by the steam pressure in the cylinders. The wire hawser is wound on a drum that is driven by a pinion gear on the crank shaft of the engine, which meshes with the gear on the drum shaft. This machine has a regulating, reducing steam valve, in which the opening is increased or diminished, according as the strain on the hawser increases or diminishes. The action of the machine is as follows: In a seaway, as the vessel pays off, thus increasing the strain on the hawser, the drum begins to revolve and to pay out the hawser. This action opens the regulating valve and increases the steam pressure in the cylinders until the pressure is sufficient to equal the strain. Then if the strain decreases on the hawser, the pressure in the cylinders will revolve the drum and shorten the hawser. In this way the machine is prevented from paying out the whole of the hawser, and only enough is slackened out to relieve the extra and immediate strain on the hawser, and thus prevent its injury or its breaking.

Steamship owners on the lakes who were towing large barges long ago recognized the advisability, if not the necessity, of having towing machines, as for instance a tow of Capt. James Davidson's fleet, which comprised 14,000 gross tons, and the 17,000-ton tow of the Bessemer line (Rockefeller fleet) but lately it has been seen that there would be as great a saving and as great an advantage in towing smaller barges with the towing machine, as in the



STEAM TOWING MACHINE.

case of the larger barges. For this reason the owners of the steamer E. B. Bartlett, at West Superior, and of the steamer Samuel Mitchell, at Cleveland, have added the towing machine to the equipment of these vessels, also the American Steel and Wire Co., who has taken over the Zenith Line of steamers. The American Ship Windlass Co. have machines adapted for every class of vessel and are building all five of the sizes, namely, No. 1, No. 2, No. 3, No. 4 and No. 5 machines. The smallest machine, No. 1, is made entirely of steel, and weighs 9,800 pounds and occupies a space on deck of 5 feet 2 inches by 5 feet 8 inches and they have the intermediate sizes of machines up to their largest size, No. 5. The No. 5 machine weighs 28,000 pounds, and is calculated to be large enough to tow any vessel that floats at the present time with perfect ease and safety.

The American Ship Windlass Co. have shipped since the first of January, in addition to the machines for the steamers E. B. Bartlett and Samuel Mitchell, a towing machine for the barge James Smeaton, building by the American Steel Barge Co., West Superior, Wis., for the Bessemer Steamship Co. (Rockefeller fleet), Cleveland, and one to the League Island Navy Yard, Philadelphia. They have orders on their books now for two more machines for barges build-

ing by the American Steel Barge Co. for the Bessemer Steamship Co., and three machines for barges building by the Chicago Ship Building Co., and one machine for a tug building for the Philadelphia & Reading Railway Co.

The interests engaged in towing on the Great Lakes fully recognize the value of the automatic steam towing machine, especially in plugging along the 4,000 to 8,000-ton steel tow barges, now being regularly put afloat from the various lake shipyards, nor does it appear that the present wishes of owners and managers will be reached until three of the largest type of steel tow barges may be loaded and safely brought along in all weathers from port to port, and this principally, through the practical merits of the steam towing machines.

Were all parties who are extensively engaged in towing, as progressive in adopting practical appliance as the vessel owners mentioned on the lakes, the recent several towing failures in the North Atlantic would probably not have been heard of. Salvage, wrecking and large towing companies will no doubt soon be furnished with this essential equipment, thereby not only will an incalculable amount of anxiety, expenses, etc., be done away with, but many valuable lives be saved in the case of a serious breakdown or castaway, by the adoption of the patent automatic steam towing machine. We look to see this appliance brought into more general use and become of universal repute.

THE TUGRIN FOG DISPELLER.

This consist of an outlook pipe, 8 feet long and 3 inches inside diameter, with a wide flange at the mouth, placed so as to be convenient to the navigating officer. A tube enters the pipe from below and a blower sends a powerful stream of warm air through the tube and the pipe straight ahead, blowing a hole right through the fog, which is rolled back in every direction; the moisture is said to condense and fall in raindrops, and the navigating officer is enabled to see through the densest fog for several hundred feet.

If this blower operates satisfactorily in a horizontal direction, it ought also to do so in a vertical, and the region around the blower should, therefore, be well wetted by the raindrops that are thus formed out of the fog. It may be an expensive operation, but we commend it to attention on the coast of California, where it is desired to utilize the fog.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	5,000	240,000	566,000	3,000	15,000
Chicago	4,931,000	10,124,000	961,000	144,000	745,000
Detroit	109,000	284,000	5,000	3,000	2,000
Duluth and Superior	9,835,000	5,078,000	2,083,000	260,000	177,000
Milwaukee	26,000		3,000		66,000
Montreal	101,000	9,000	485,000	3,000	14,000
Oswego					
Toledo	209,000	201,000	153,000	2,000	
Toronto	34,000		15,000		10,000
Grand Total	27,466,000	22,045,000	7,891,000	953,000	1,601,000
Corresponding Date, 1898	22,528,000	24,913,000	9,534,000	1,886,000	606,000
Increase	6,788,000	3,766,000	1,622,000	232,000	71,000
Decrease					

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

OPENING OF NAVIGATION.

Interlake navigation opened with the passage of the steamer Waldo into Lake Superior on the afternoon of April 29. She arrived off Duluth at 2 a. m., May 1, but could not make port immediately on account of the ice that had been drifted into the harbor by a northeaster.

The steamer R. G. Stewart arrived at Houghton on May 1 from Duluth. She reports having experienced no trouble until reaching the Apostle Islands. Thence to Ontonagon considerable floating ice was encountered.

The warm weather of April 29 and 30 caused the ice to disappear with astonishing rapidity.

VESSELS CLASSED.

Vessels classed and rated by the American Bureau of Shipping in the Record of American and Foreign Shipping this week are as follows: Ship, B. P. Cheney; bark, Alice; tern, Andrew Nebinger; tern, St. Thomas; British tern, Evelyn; Swedish bark, Pallas; and Portuguese bark, Neptune.

NOTES.

"To discontinue an advertisement," says Ex-Postmaster-General John Wanamaker, one of the largest advertisers in the world—and, naturally enough, one of the most successful business men—"is like taking down your sign. If you want to do business you must let the people know it. I would as soon think of doing business without clerks as without advertising."

THE issue of the American Elevator and Grain Trade, for May 15, will be a notable one. It will take on extra pages and will present its readers with a number of special articles, illustrations and other features, which, the publishers think, will be both valuable and interesting to the trade. The proprietors of the American Elevator and Grain Trade say: "We intend to make it the handsomest as well as the largest and best issue of any journal ever circulated among dealers and elevator men. We have never before indulged in a special issue, but at this time of general expansion we think such a number as we have in view will serve more than one laudable end. For one thing, it will afford advertisers an unusual opportunity, which we are sure they will appreciate."

A DISPATCH from Duluth, Minn., is to the effect that the American Steel and Wire Co. has become extensively interested in the ore fields of the Mesaba district. Examinations have been made by experts in the employ of the company, and it is announced that several extensive mining properties have been purchased. Some time ago the company bought what is known as the Zenith Line of steamships, consisting of five large steamers, each valued at \$250,000. In addition to this fleet it has placed orders with a Chicago shipyard for two steel barges, each of which, it is claimed, will have a capacity of 7,500 tons. These two steel barges, which are building by the Chicago Ship Building Co. are each to have a No. 5 towing machine, as manufactured by the American Ship Windlass Co., Providence, R. I.—Manufacturers' Record, Baltimore.

NO ONE has sized up the action of Captain Coughlan, of the Raleigh, better than the Speaker, of London, which says that no punishment which the Navy Department could inflict upon him would be felt more severely by him than the consciousness that he himself embarrassed his Government by indiscreet utterances. At the same time he said no more than many a man would have said in his home circle. Capt. Coughlan was buncoed by his friends. He expressed himself freely before them with the idea that what he said at the club was to be received as intimates receive the expression of personal opinions. It was a great breach of trust when his social shore entertainers permitted his private utterances to be made public. It might also have been added that the utterances of government employees is not that of our legislators, nor do they convey the expression or sentiment of the government. As a rule we place too much dependence if not reliance, on the general remarks of an official—and by that term we mean either commercial or national.

Two warships built by the Government at the New York and Norfolk Navy Yards, have proven to be failures for craft of their class, and are to be altered and modified at a large expenditure of money. These ships are the cruisers Raleigh and Cincinnati, the former built at Norfolk and the latter at New York, some years ago. Each has been actively employed during the war period, and now that their services may be dispensed with it is proposed to place them out of commission and begin the work of reducing their engine power and increasing their steaming radius by enlarging their coal supply. As originally designed these ships were intended to develop the horse-power of ordinary battleships, and each was expected to have not less than 10,000 horse-power, although it is doubtful if either has ever obtained them. Their machinery was so powerful that they could scarcely carry sufficient coal to steam them across the ocean, and to reduce some of this unnecessary power and to increase their coal capacities, it is proposed to bring their horse-power down to 7,500, by the substitution of water tube boilers for the Scotch boilers, and to make other changes in the interest of greater economy for these vessels. To complete this work will require the attention of the navy yards for at least two years, but when they are again commissioned they will present far more serviceable ships than they are to-day. It has been definitely determined to have the changes in the Raleigh made at the Portsmouth Navy Yard, and those of the Cincinnati at the New York Yard. Work on the latter ship has already begun, and that on the former will be ordered soon after the glorification ceremonies due to her safe return from Manila are over with.

LAKE ONTARIO COMPETITION.

There have been rumors afloat in respect to the proposed competition between the Richelieu & Ontario Navigation Co., and the Thousand Island Steamboat Co. It was reported that the Folger Brothers on behalf of the Thousand Island Co., had tried to compromise with the R. & O. Co., offering to take their boats off the Montreal route, providing the R. & O. Co. would not oppose them in the local business. The Kingston News learned that the reports had no foundation, and that the American line steamers would start a daily season on the Montreal route between June 15th and 18th. The exact date will depend on the summer schedule of the New York Central Railway. The outlook for travel on the American boats was never brighter. The steamer Argyle, owned by A. W. Hepburn, Picton, will make three trips a week between Toronto and Alexandria Bay, connecting with the American line boats. She will call at Charlotte and Oswego on her way down, and run in opposition to the steamer Toronto. A large number of excursion parties by this route have been secured. It is said

is now reported that an English syndicate has obtained options on a big tract of oil lands in the Cherokee nation, Indian Territory, and proposes to export oil in opposition to the Standard Oil Co., using the Port Arthur route and putting on a line of tank steamers. The rate from Port Arthur to European ports is no higher than from New York, and the new route touches a region which now sends a large amount of its products over the Great Lakes. It behooves us, therefore, to keep an eye on the extension of railways connecting with the new Texas port, for it is not improbable that it may become a very aggressive competitor in territory which is tributary to the head of the lakes.

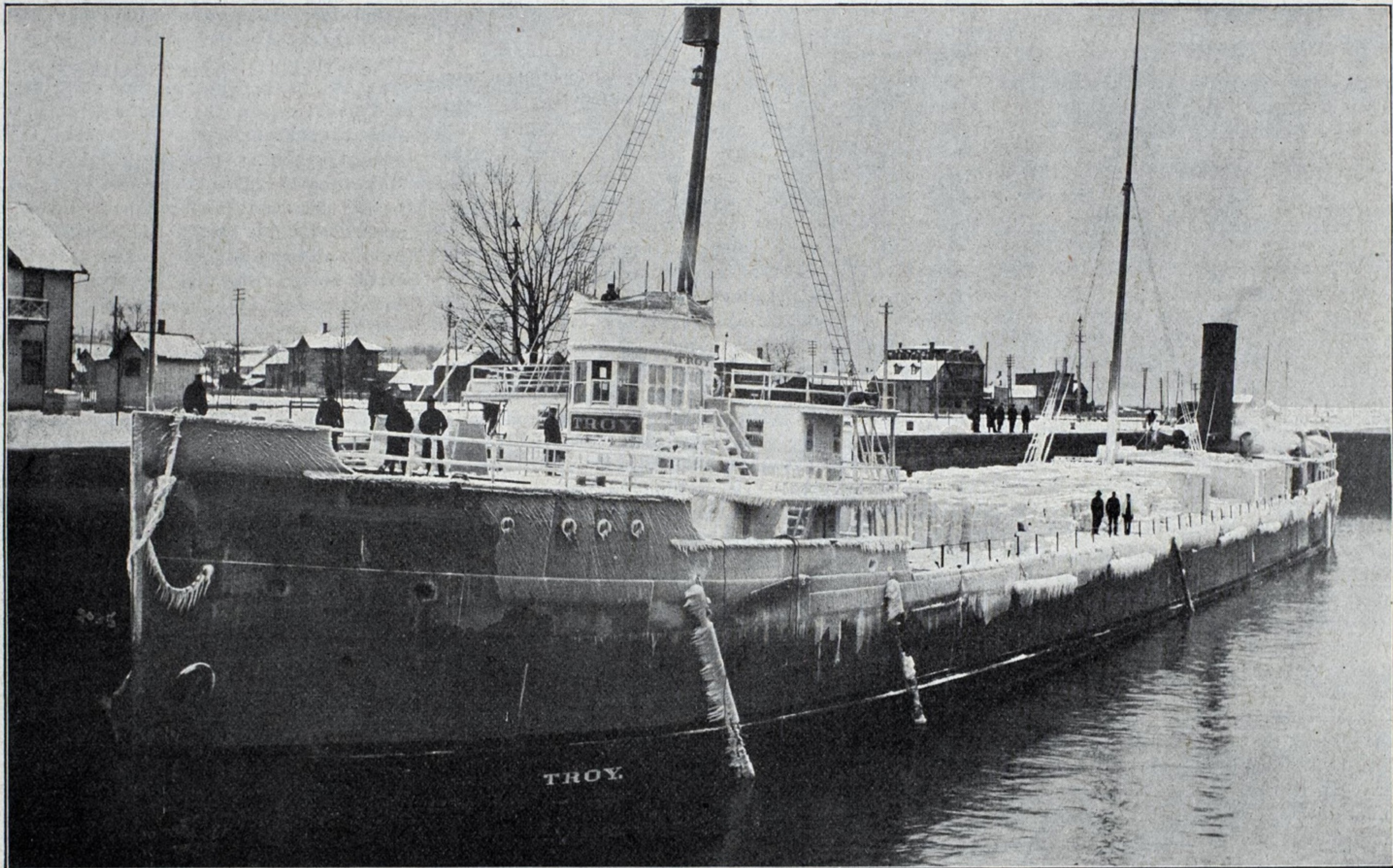
EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, report the eastern freight situation as follows:

Our merchants have apparently at last succeeded in securing some fresh orders for the shipment of cereals, as may be inferred from the increase in fixtures reported. So far, rates of freight show a limited advance only, in spite of

AMERICA'S CHALLENGE TO SHIP BUILDING.

The ruling factor, of course, is price, and at present anyone wanting a steamship can buy it cheaper in England or Scotland than in America. How long is that likely to continue? Material, as has been shown, has already been made more cheaply in the United States; labor, on the other hand, is dearer. I have spoken of the advent of labor-saving methods in the American shipyards. It would, of course, be easy to make too much of this, for the trained man will always be needed, and the more highly specialized tools become, the higher must be the training and capacity of those who direct their use, not necessarily those who directly use them. It would be well if British shipbuilders could take the initiative by raising the wages of their best men (before the latter go out of the country) and compensate themselves by reducing the demand for labor through improved mechanical devices. One could go into Glasgow or Newcastle any day, and engage a staff of younger men—thoroughly acquainted with detail, though they may not have attained to the highest positions—at a cost which would be insignificant



WESTERN TRANSIT CO.'S. STEEL, GENERAL CARGO STEAMER TROY.

This illustration from Beeson's Marine Directory of 1899.
Built in 1898 by the Detroit Dry Dock Co.

This photograph was taken by Allan Fanjoy, photographer at Sault Ste. Marie, while the vessel was being locked through the "Soo" canal, bound down from Duluth, after having come safely through the great blizzard and snow storm in which the steamers Tampa, Orr and Harlem were stranded, involving total loss, but afterwards floated, except the latter, and an expedition is now formed to release her.

on good authority, that negotiations are on the way for the purchase of one or two steamers to run from Montreal to Quebec in connection with the American line, thus completing the missing link for that service. The steamer New York has been greatly improved, and her machinery overhauled so that her speed will be greater this year than last.

It is certain, however, that the American line is much more popular than the arbitrary and monopolistic R. & O. Co., which from some standpoints seem to think they own not only the St. Lawrence and its tributaries but Lake Ontario also.

THE NEW GULF PORT.

Port Arthur, Texas, which has just completed excellent harbor facilities, is indulging in visions of vast water commerce in the export products of the great region north and west, and is even looking so far away as the wheat fields of Minnesota and Dakota. And this new port certainly has the assurance of a very respectable traffic without cutting into the business of the wheat fields. It will have a great traffic in lumber and live stock, cotton and corn, and it

owners' efforts to secure better figures by holding their tonnage out of the market, and without which latter fact, our list of charters would doubtless show a fair numerical increase. Berth freights have experienced a slight turn for the better for later deliveries, although still wretchedly low for prompt shipment. The demand for steamers for deals and for timber from the Gulf ports is by no means urgent, but a steady and rather unusual demand, in view of the season, continues to prevail for general cargo from the Gulf and the tendency of rates thence is towards a further improvement in freights, now already quite out of line with what can be obtained at all other shipping points on this coast.

In consequence of the difference in views of shippers and owners respectively, business in sailing vessels has been rather restricted, but, although the tendency of the market seems momentarily to favor the former in respect to long voyages, we cannot report any serious decline in rates. In other lines we have no news to report, beyond the fact that a fair demand prevails for vessels to suit the South American trade, which, being scarce, rates are gradually hardening.

compared to the magnitude of the work involved. There are no secrets in shipbuilding and marine engineering.—G. R. Dannel in The Engineering Magazine for April.

ADJUSTMENT OF SHIPS' BAROMETERS.

The Weather Bureau official at the "Soo," Mr. Alexander G. Burns, will be in his office or on the canal locks as much of the time as may be possible, for the purpose of adjusting ships' barometers.

Vessel masters are invited to have their barometers compared and adjusted whenever passing the "Soo." There is a slight rise in pressure (about two-hundredths of an inch) in passing through the locks bound down and a fall of the same amount bound up. In making a trip from Duluth to Buffalo the changes in the barometer, supposing, of course, that normal weather conditions prevail throughout the entire passage, should be as follows: Starting at Duluth in May, the barometer should read about 29.31 inches; at Marquette it should read about 29.32; below the locks at the "Soo," about 29.34; at Alpena, 29.34; Port Huron, 29.35; Detroit, 29.37; Cleveland, 29.38, and Buffalo, 29.37. On Lake Michigan the barometer should read about 29.35 under normal conditions.



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CLEVELAND, O., MAY 11, 1899.

WONDER if Connors was trying to play a sharp game with the Buffalo grain handlers anyway?

VESSEL owners have been on the lookout for a short season as a God send, between the weather and labor troubles there is a chance this year for their wishes to be gratified, and we hope that the dividends to shareholders will see a corresponding increase. Managers can manage, and figure on not placing their tonnage too far ahead of the indications or temporary freight market.

THE Lake Carriers' Association should be mighty careful who they tie up to in the future. Once tied up there should be no backdown, at the same time it is always advisable to be circumspect and it has been found impracticable to let the tail wag the dog, usually, and naturally the wagging goes the other way. Sailors no longer require fighting but longshoremen are, and will always be, a feature to figure on in marine work.

SINCE most of the glory of the late Spanish-American imbroglio must preface be awarded to the navy, it would be in order for the active participants therein to found an order on the same or similar lines to the G. A. R. of which we have such an abounding and abiding influence. The key to the situation and arguments pro and con rests in the fact that the soldiers have a vote, sailors have none. Now let one of our statesmen regulate this code, so that sailors, naval and mercantile, may vote, by proxy when or if necessary, in whatever part of the world they may be. Sailors should not be written off the list of citizens simply because they don't happen to be under the influence of a "ward heeler."

If steps are not taken in the question of a deep water canal to the coast through the United States territory, it is possible that we may find such an outlet would not be required. The Georgian Bay canal across the Dominion as well as other outlets, coupled with the improvement of the St. Lawrence system of canals, now nearly completed, should be warning enough. Besides, a southern port is now tapping the grain belt of the west and south-west. Even as if this was not enough, a seventy mile railway is in contemplation between Collingwood and Toronto. With this short railroad completed, say at a cost of \$3,000,000, the Dominion Minister of Public Works states as follows: "On the upper lakes a transportation company could run its mammoth steel carriers, with cargoes of a quarter of a million bushels, to Collingwood. Through elevators at that port the grain could be rushed by heavy engines to Toronto, and then trans-shipped to Montreal. Knowing just what it would cost per hundredweight to pass the grain over the 70 miles of railway, the company in question could contract for cargoes from the head of navigation to the sea."

WAR SHIPS ON THE GREAT LAKES.

Our esteemed contemporary, THE MARINE RECORD, Cleveland, Ohio, says:

"A Washington dispatch conveys the intelligence that it is a virtual certainty that the new cruiser for the Great Lakes will now be built. Diplomacy has about cleared the road of the treaty obstacle that stood in the way, Sir Julian Pauncefote having intimated to Secretary Hay that Great Britain will consent to amend or annul the Rush-Bagot convention in such a way as to permit the building of armed ships of modern types.

"This agreement was made at the request of the United States in 1818 between the British Minister, Charles Bagot, and Richard Rush, Acting Secretary of State. It provided that the naval force of each nation should be limited on Lake Ontario to one ship, and on the upper lakes to two ships, not exceeding 100 tons and armed with one gun not exceeding in size an eighteen-pounder.

"The agreement has been violated by both nations by mutual consent, and the old steamer Michigan, now nominally guarding the upper lakes for this country, has a displacement of 365 tons and carries six six-pound rapid-fire and two one-pound rapid-fire rifles and two gatlings. Sir Julian's agreement to modify the antiquated convention will permit the Navy Department to build a modern ship."

Questions that present themselves to the mind of the average reader are: Why does the United States government desire to have war ships on the Great Lakes? Why does that government desire to amend or annul the Rush-Bagot convention in such a way as to permit the building of armed ships of modern types on the Great Lakes? Why is it considered that "the old steamer Michigan" now only "nominally" guards American interests on the Great Lakes? In what consists such "guarding?" In endeavoring to suppress the desultory smuggling that may be carried on from Canada in small skiffs and row boats, would not rapid steam launches be more effective than any war ships that could be built? Or is it because the water is there to float them, and the shipbuilders are there who would be pleased to construct them that our neighbors are so frantically anxious to have war ships on the Great Lakes?

Although "the old steamer Michigan" may be the only war ship our neighbors may maintain on the upper Lakes, it is one more than Canada has; and it is not true that Canada has violated the agreement by maintaining any war vessels whatever on any of the lakes. If the United States really desire to have war vessels on the lakes, seeing that the war vessels of no other power are there to confront them, or to be a menace to the peace of that country, it could be for no other purpose than a menace to Canada. Canada does not desire to maintain war vessels on the lakes, and until she does there can be no necessity for the United States to do so.

It would not be wise to disturb the terms of the Rush-Bagot convention. The United States cannot build armed ships of modern types or of any other type on the Great Lakes for service in any other waters, and get them away from the shipyard in which they were constructed, except by the grace and permission of Canada, and Canada will never grant that permission.—The Canadian Manufacturer.

The Canadian Manufacturer is always consistent in its views, and brother, or rather cousin Cassidey, we believe is generally open to conviction. On this basis we reply that the exact point is not to have war ships on the lakes, for none are required; furthermore, we bow to the courtesy of the Dominion government in permitting our light-house tenders Gresham, Algonquin and Onondago to proceed through their waters to the coast during the period when we had a slight friction with Spain; moreover, we have other incidental maritime favors to acknowledge on account of the St. Lawrence system of canals having been made navigable by the Dominion government for reciprocal wrecking privileges, etc.

Let us, however, suggest that the fishery cruisers built recently at Owen Sound, Georgian Bay, were, and are, a good deal like ram gun boats and essentially naval in all respects.

The United States registered no kick, although perfectly aware of every rivet and other details, including equipment, that went into those hulls. Fishery cruisers were necessary in order to uphold the Dominion laws, hence, our acquiescence, but they are little war vessels just the same and intended as such, or the reason for their construction is not apparent or palpable.

The sole argument on our part, from an industrial standpoint, is as follows:

There are shipyards, engine building establishments and

boiler works in the United States with accompanying industries. Citizens residing and doing business at lake ports have invested millions of dollars in the foregoing industries and perhaps a million of men, more or less, are interested therein. The antiquated agreement debarb this multitude of labor and capital from action and discriminates to that extent between citizens of the United States.

We have no doubt but that all interests would agree in stating that any departmental, or rather naval tonnage constructed on the lakes, should not be fully equipped until it reached the coast; moreover, the stipulation might as easily be made that no craft built to the order of the Navy Department should remain on the lakes after equipment, partial or complete.

Let us assure the Canadian Manufacturer that we do not desire a flotilla of war ships on the lakes, there is, and we hope never will be any more occasion for such a departure. The last whipping that John Bull received on Lake Erie was a well enough taught lesson. All that we do ask for, is that lake shipbuilders should not be discriminated against in sending their bids to the government for the construction of national tonnage.

Relative to the inuendo that lake built craft can only reach the coast by the "grace and permission of Canada," we can simply refer to the U. S. S. Michigan, built at Pittsburgh, Pa., in 1844, put together and launched at Erie, Pa., and in service as a lake patrol ever since, so that it is nearly time that she had a rest. The position is, therefore, clearly defined, in stating, that lake shipbuilders as citizens of the United States ought no longer to be debarred from bidding on the construction of national tonnage, the Rush-Bagot agreement to the contrary notwithstanding. This, we perceive is all there is to the question of building naval tonnage on the lakes. Otherwise, the Michigan episode and experience can be quickly and easily duplicated, or rather reversed, inasmuch as material for construction might be shipped east instead of west, as in the case of the Michigan, over half a century ago.

WE have been asked to print the complete list of officers—masters and engineers, appointed this season for the lake fleets. Such a list would hardly be worth the ink used in taking an impression, as already, and almost before the full opening of navigation has taken place, there have been about fifty transfers, exchanges, resignations, etc. Owners of vessels notify the RECORD of their intended appointments each spring, and this too, usually well in advance of the opening of navigation, but there are always numberless changes taking place, and the correct list for one week, or even one day, would require a revision for the next. The RECORD prints all appointments as they are made, but we do not undertake to vouch for the officers joining their boats in the order named, or at all, for that matter, much less expect them to remain all season in any capacity or on any particular boat. An officer joins a vessel but on that account it is not to be expected that he marries her, besides, changes are regularly and frequently made by the owners, for good and sufficient reasons, and a temporary printed list of officers could only be compiled by an ignorant and utterly unsophisticated novice who itched to squander money on printer's ink, to serve no good purpose and to do evil by misleading.

GOVERNOR Roosevelt, of New York, the redoubtable Teddy, the fire eating Rough Rider, was much interested in the recent grain shoveling trouble at Buffalo. The State Labor Commission worked unceasingly to bring about an amicable adjustment of the points in dispute. The most interested parties, or those who had the largest financial interests at stake were the owners of vessel property as represented by the Lake Carriers' Association, and it is unnecessary to state that they also did their level best to settle matters. Now, the way the whole matter was brought to a focus and wound up is a caution to the Greeks—or Gods. The decision may be like the laws of the Medes and Persians, which could not be altered, at the same time, there is room for an expression of doubt regarding such a jug handled arrangement.

THOUSANDS of sailors and firemen, as well as other members of a vessel's crew, are laid up from a few days to weeks or months in the marine hospitals of the lakes. For years the MARINE RECORD has been sent regularly and free of charge to all the marine hospitals, bethels, and other national as well as charitable institutions. This is our donation to beguile the weary hours of sickness and convalescence among those whom we cater to and write for.

THE thanks of the RECORD are due the Dominion Minister of Marine and Fisheries, Ottawa, for an advanced copy of the "Georgian Bay and North Channel Pilot," for 1899. This book of sailing directions, strongly bound, 9x6 inches, contains 358 pages and is one of the most comprehensive as well as inclusive works ever issued. Usually, sailing directions are none too explanatory; there is always something found wanting, descriptions of land marks, bearings, etc., generally leave something to be desired; but, the Georgian Bay Coast Pilot furnishes the most minute data. The work is such an excellent one that we can say nothing but in praise of it and that it should be in the hands of all North Channel and Georgian Bay traders. There is one suggestion, however, that occurs to us at this time and we may say with a view to enhancing the value of future issues, that a few plates and illustrations of the appearance of certain localities would be found of great value to the lake pilot visiting Georgian Bay only at infrequent intervals. Special attention has been given to the meteorology of the locality and more than four pages is taken up with the season characteristics of the weather, etc., including remarks on the action and working of the barometer. Now that trade is developing at Parry Sound, Collingwood and Owen Sound, the work is a most timely one and reflects great credit on the Department of Marine, Ottawa, Ont.

WE have been made aware of the issuance of an amended "Notice to Mariners" published by the Hydrographic Office, Bureau of Equipment, Navy Department, Washington, D. C. We have not heard direct from the Department, and sincerely hope that our prompt correction of a serious error in such a valuable compilation as the weekly report of "Notices to Mariners" as issued by the Hydrographic Office has been the cause of no uneasiness to a generally painstaking and conscientious corps of officers. There was an unaccountable conglomeration of geographical terms in the "Notice" alluded to in our past two issues, nor did it appear to be the result of typographical errors. However, as we previously remarked, we are all prone to err sometime or other and p'raps sometimes oftener than others.

NOW THAT the demurrage clause in the coal bill of lading has been generally accepted, it will show a lack of business aptitude if agents and brokers neglect to have the provision inserted in all bills of lading and charter parties that go through their hands. The broker is agent for the vessel-owner, and it is his duty to conserve the rights and best interests of his patrons, even should the vessel owner be neglectful of this feature himself. The committee of the Lake Carriers' Association having this matter in charge completed their labors successfully, and the excellent result must not be allowed to become inoperative through the laxity of a few men. Insert the demurrage clause in every coal bill of lading.

LAKE seamen are beginning to have a taste of what quarantine is like. Medical inspection and vaccination is now the rule at lake ports, and this order has been sent forth by the Marine Hospital Service, owing to smallpox being more or less prevalent. There has been no vessel quarantined as yet, but if, on the medical inspection any dubious cases are found, the vessel and her crew will be isolated, and the regular form of a strict quarantine gone through with. On the foregoing grounds, masters, chief engineers and shipping clerks should exercise a little more caution than usual in shipping, or sending hands to join a vessel at any port. Those who are shipped should be at least cleanly, and have the appearance of robust health.

ATTENTION is directed to the Duluth ship canal entrance, where government work is now being carried on. A penalty is in force for any vessel exceeding a six-mile speed, while the dredging, pier building, etc., is in progress. Vessel masters are requested and specially enjoined to exercise every possible care in passing through the canal. A strict attention to the notice will be to the best interests of all concerned. A circular letter containing this information has been sent out by Chief Clerk James L. Owen, under the direction of Major Sears, Corps of Engineers, U. S. Army, to as many marine interests as it seemed possible to reach.

INTERLAKE navigation opened with the passage of the steamer Waldo into Lake Superior, on the afternoon of April 29. She arrived off Duluth at 2 a. m. May 1, but could not make port immediately, on account of the ice that had been drifted into the harbor by a northeaster.

BUFFALO STRIKE SETTLED.

Every possible means has been used during the past week to settle the grain shovellers strike at Buffalo, and the efforts of all interests brought matters to a successful termination on Wednesday afternoon. The following are the conditions under which the shovellers go back to work:

All control of the grain shoveling at that port shall hereafter be lodged in the hands of an inspector or general superintendent to be named by Bishop Quigley. His pay shall come from the Lake Carriers' Association, and in no way be a charge upon the shovellers. They are to receive \$1.85 per thousand bushels.

The general superintendent shall have absolute control of the hiring and discharging of men and bosses, and paying them, and in fact possesses absolute authority over the shoveling of grain.

The contractor will receive his five cents per thousand bushels to the end of the season, when his contract expires. The agreement also provides that in case of a difference between the shovellers and Lake Carriers, a board of three arbitrators shall settle the difficulty.

This is said to be practically the terms offered by the Lake Carriers' Association.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset by reversing the east bearings given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting:

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.		
Sunrise.	Bearing.	Bearing.
May 12.....	E. 24° N.	E. N. E.
May 18.....	E. 26° N.	E. N. E. ¼ N.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.		
Sunrise.	Bearing.	Bearing.
May 12.....	E. 25° N.	E. N. E. ¼ N.
May 18.....	E. 28° N.	E. N. E. ¾ N.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.		
Sunrise.	Bearing.	Bearing.
May 12.....	E. 26° N.	E. N. E. ¼ N.
May 18.....	E. 29° N.	E. N. E. ¾ N.

LAKE SUPERIOR, LAT. 48° N.		
Sunrise.	Bearing.	Bearing.
May 12.....	E. 27° N.	E. N. E. ¾ N.
May 18.....	E. 30° N.	E. N. E. ¾ N.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

RIGHTS OF REPORTERS.

The Kansas City Star has had, as have most newspapers, some unpleasant experiences with public servants who get the notion that they are public masters, and it lays down some good sound principles as to the way officials should conduct themselves toward the press. It very properly says that inasmuch as newspapers furnish the medium through which the public learn what is going on, they occupy a public position which invests them with the duty of obtaining and printing the news. The newspaper reporter is, in fact, a representative of the people, and when he seeks legitimate information he is exercising a right which no one can properly question or deny. He pursues his calling, not with any purpose or desire to interfere or meddle in the affairs of others, but to discharge a plain obligation to the public.

Many other intelligent persons do not seem to understand that it is quite impossible for any one man to defeat or hinder the work of a public journal by refusing to recognize its reporters when they are seeking to exercise their proper prerogatives. Nothing can exceed the absurd assumption of the individual in charge of affairs which are of interest and concern of the public who turns down the newspaper reporter and interferes with the performance of his duty. The person who takes upon himself such unwarranted authority does not harm the reporters and the newspaper so much as he harms the public.

For example, a newspaper reporter has as much right on

a wrecking train as the officials of the railway. He goes on the floor of the legislature because he is as properly placed there as the representatives themselves. All institutions which are created and supported by the people and which touch their common welfare must, according to the modern order of things, be subject to public scrutiny, and the newspaper reporter is entitled to be present, and to see and ask questions without hindrance or evasion.

A NEW TRANSPORTATION LINE.

The O'Connor Transportation Co. is trying to start a new steamer line between this port and St. Joseph, Mich. The same line last year operated the State of Ohio and Lawrence on the route, the Ohio being withdrawn by her owners before the season was half over. Hugh O'Connor, representing the company, has closed a contract with A. B. Richards, of St. Paul, for the steamer Grand Rapids, which they wish to put on the run in opposition to the Graham & Morton line. It was stated that the line would resume operations May 15, and later would add the excursion steamer Mary, of Port Huron, to the business. It is said, however, that the owners of the dock property on the river at St. Joseph refuse to rent to the O'Connor line, and business men say the line is not practicable. Mr. O'Connor says that the Grand Rapids will be put on this month.

PEEUMATIC TOOLS.

The Pneumatic Supply and Equipment Co. has been organized under the laws of the State of New York, and has opened an office at 120 Liberty street, New York. It is the purpose of this company, as its name implies, to deal generally in compressed air equipment, and it will make a specialty of the installation of complete plants, eliminating the division of responsibility which has heretofore existed in the trade. The company is bringing out several specialties in the compressed air line, such as pneumatic oil rivet forges, quick acting hose couplings, and has in addition closed agencies for several standard types of compressors. Mr. J. W. Duntley, the president of the Chicago Pneumatic Tool Co., is the president of the new company. Mr. E. B. Gallaher, formerly with Messrs. Patterson, Gottfried & Hunter, is vice-president and engineer, and Mr. W. P. Pressinger, formerly manager of the Clayton Air Compressor Works, is secretary and treasurer. The rapidly widening scope of compressed air application opens a large field of usefulness for the new company, and the character of its incorporators is an assurance of its ability to meet the requirements of the trade.

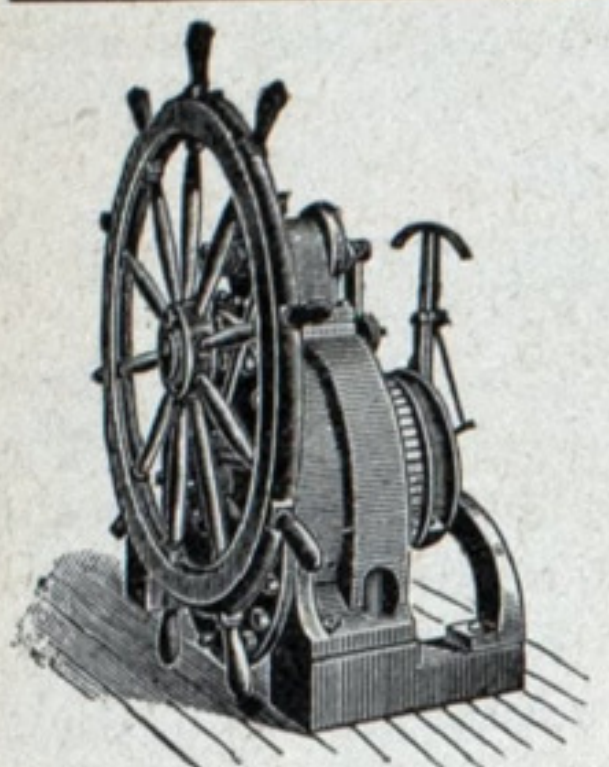
PORTLAND CEMENT IN SEA-WATER.

Letters patent have recently been granted in the United States to Mr. H. J. Livingston, of Baltimore, for a process which is said to enable any ordinary Portland cement to be used in sea water. The inventor claims to have discovered that a mixture of carbon, hydro-carbon, and slaked lime with Portland cement will neutralize any free or uncombined lime accidentally or negligently left in it, therefore assuring its permanence in ordinary sea or harbor work as well as in land work. He has ascertained that a very large proportion of lime hydrate can be added to cement, even up to 125 per cent. without prejudicing its hydraulicity, but he states that an addition of 15 or 25 per cent. gives the best results. If 15 per cent. of lime hydrate be added the cement is stronger than Portland and carries sand better, while if 25 per cent. be added the mortar is much stronger than that made from pure Portland, and in about three months the neat cement so improved and altered is equal to Portland and drawing ahead of it. The advantages of Portland cement, treated as proposed by Mr. Livingston, are: No gypsum is required in the manufacture; it is very slow setting; cracking is almost absolutely prevented even under the most trying conditions; the cost of manufacture is lessened, and beyond all these it is more plastic and adhesive than ordinary Portland.—Engineer's Gazette, London.

Damages—Breach of Contract of Carriage.—In an action against a vessel for damages by reason of a failure to afford passengers a reasonable opportunity to land on reaching their port of destination, and their carriage to a distant port, the measure of recovery is the actual damage sustained, which includes the fare paid, and, where the passenger returns to the port at which he took passage, the cost of such return, together with a reasonable sum for the loss of time necessarily resulting from the breach of the contract. The President, 92 Fed. Rep. (U. S.) 675.

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Hydraulic Steerer.



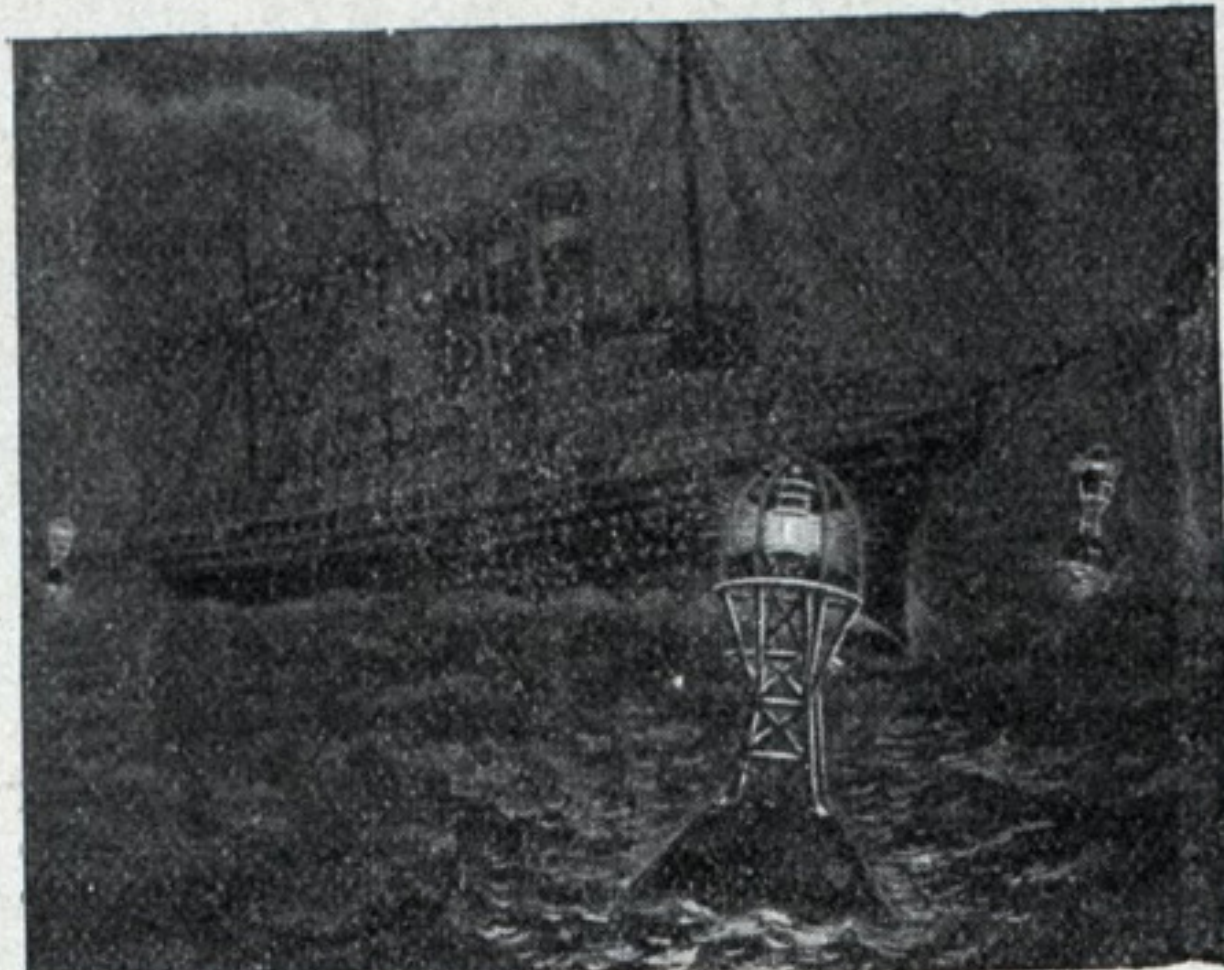
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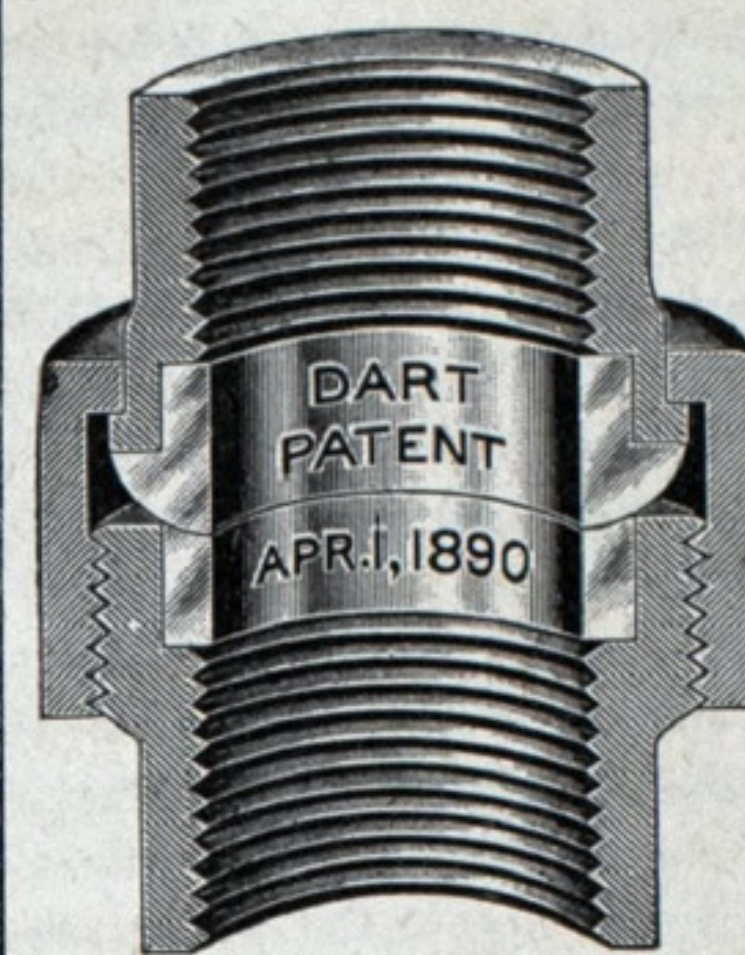
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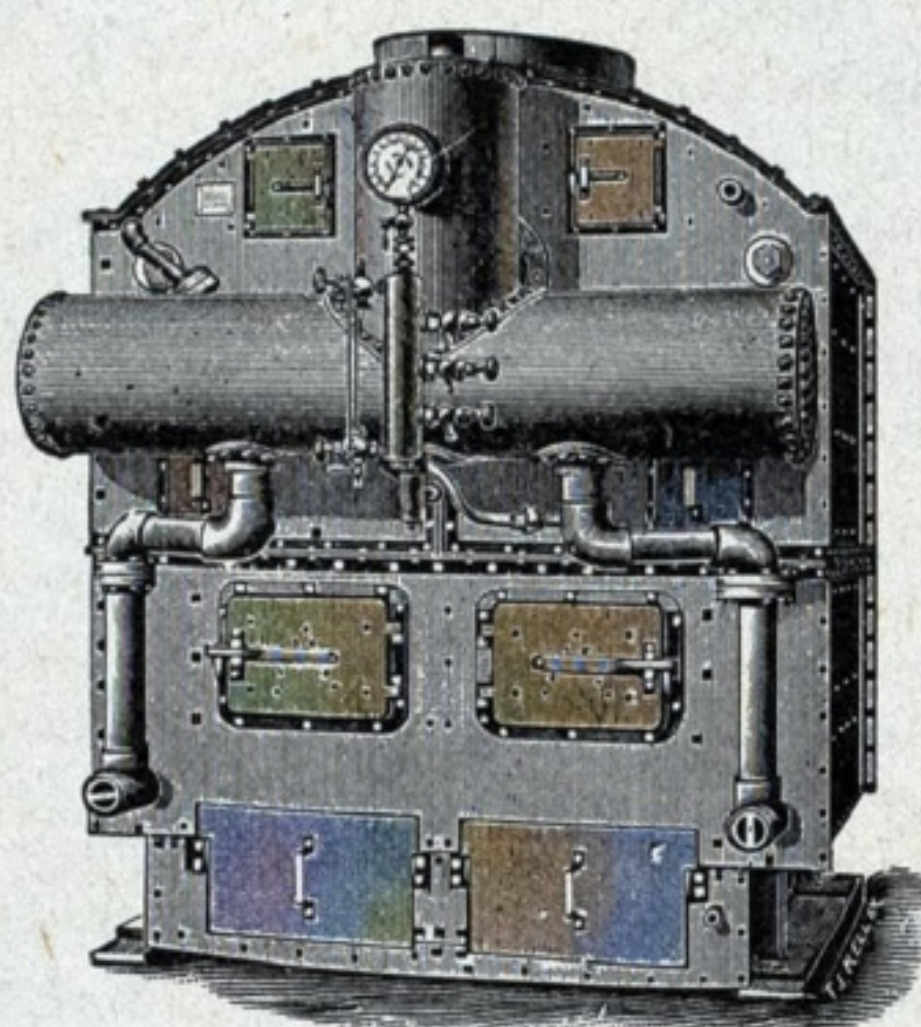
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SHIPPING AND MARINE JUDICIAL DECISIONS.

(Collaborated specially for THE MARINE RECORD.)

Excessive Speed in Fog.—Where the full speed of a steamer was 10½ or 11 knots, a reduction of from 1 to 1½ knots in a fog still leaves the speed excessive. The reduction, even in a moderate fog, should be at least two-thirds of full speed. The *Cheruskia*, 92 Fed. Rep. (U. S.) 683.

Harter Act—Effect on Foreign Vessels.—Foreign Vessels being entitled to the benefit of the Harter act (2 Supp. Rev. St. p. 81), they will be held subject to its limitations by courts of the United States in suits for damages to cargo arising on the high seas on voyages to this country. The *Frey*, 92 Fed. Rep. (U. S.) 667.

Signals.—A passing steamer, having the right of way, is not in fault for a collision because she failed to give the signal to indicate which side she expected to take, when the other vessel was aground, and her movements could not have been influenced by such signals. The *Maurice B. Grover*, 92 Fed. Rep. (U. S.) 678.

Act in Extremis.—One of two passing vessels cannot be held in fault for a collision merely because of an error on the part of her master, where he acted in an emergency and upon a reasonable judgment, in view of the circumstances as they were presented to him at the time. The *Maurice B. Grover*, 92 Fed. Rep. (U. S.) 678.

Collision—Tug and Tow—Lockout.—A tug cannot be exonerated from fault for a collision in the night, where she failed to keep a lookout at the bow of the float she was towing, which projected about 100 feet beyond the tug, and it was not shown that the maintenance of such lookout would not have prevented the collision. The *Lyndhurst et al.*, 92 Fed. Rep. (U. S.) 681.

Collision—Steamer Aground—Carrying Sailing Lights.—Under the navigation rules on the lakes (Act Feb. 8, 1895, 28 St. 645, Rules 1, 3), a steamer should not carry sailing lights when aground, and is in fault for a collision resulting from her misleading an approaching vessel by such lights. The *Maurice B. Grover*, 92 Fed. Rep. (U. S.) 678.

Collision—Negligent Navigation.—The schooner *P* weighed anchor to the west of the channel of the Delaware river, and started to turn around, and proceed down stream with the tide, before a strong wind. The schooner *L* was sailing in full view down the east side of the channel, with a space of half a mile in width in a straight line between *P* and the line on which *L* was sailing. *P* made a wide circle in turning, and, though *P* bore further to the eastward, the vessels collided. When the collision was imminent, nothing was done by the navigators of *P* to avert it, though, if her main peak had been dropped, the collision would probably have been averted. Experienced navigators testified that *P* should

have been turned in the space of less than a quarter of a mile. Held, that the collision was the result of the bad navigation and negligence of the *P*, and that she could not recover for injuries. The *William J. Lipsett*, 92 Fed. Rep. (U. S.) 522.

Fare Furnished Passengers.—Where the fare furnished passengers on a long sea voyage is such as usually provided, and is sufficient in quantity and properly cooked, and the passengers really do not suffer, they have no ground for the recovery of damages because it is not so good as might have been furnished, or is as provided on vessels taking short voyages. The *President*, 92 Fed. Rep. (U. S.) 673.

Collision—Lights—Ship not Under Command.—Article 4 of the sailing rules, requiring two vertical red lights to be exhibited by a ship when not under command, refers to vessels in some way disabled, and does not apply to a brigantine which was simply moving very slowly in a light wind, though she had not complete steerageway for all maneuvers, but sufficient to keep her course. The *Cheruskia*, 92 Fed. Rep. (U. S.) 673.

Shipping—Carriage of Passengers—Construction of Contract.—A vessel which contracts to carry passengers to a port, where they are to procure boats to land themselves and their stores, is bound, on reaching such port, to remain a reasonable time to enable the passengers to procure boats and to make their landing, and is only excused from so remaining by act of God or the public enemies. The *President*, 92 Fed. Rep. (U. S.) 673.

Steamship and Sailing Vessel—Crossing or Overtaking—Signal Lights.—Evidence considered in relation to a collision between the German steamship *Cheruskia* and the British brigantine *R. L. T.* at sea, in the evening during a fog, by which the brigantine was lost, and held to show that the steamship alone was in fault as a crossing and not an overtaking vessel, and that no signal lights were required. The *Cheruskia*, 92 Fed. Rep. (U. S.) 683.

Lights.—A tug, in charge of a tow consisting of a tier of canal boats, which left the tow adrift in the night for upwards of an hour without proper lights at the bow and stern of the outside boats of the tier, as required by the inspectors' rules (rule 11), promulgated under 30 Stat. 102, is in fault for a collision occurring during such time, by which the tow was injured, both on the ground of the abandonment of the tow, and of towing without proper lights on the tow. The *Lyndhurst et al.*, 92 Fed. Rep. (U. S.) 681.

Collision—Tug and Tow—Right of Way—Failure to Observe Signals.—The steam tug *Defiance*, with two canal boats lashed to her side, on approaching the gap leading into the Atlantic Basin, Brooklyn, while some distance away, gave the usual long whistle to indicate that she was going in, and again, when near the entrance, twice signaled by two whistles. The tug *Dayton*, with a tow, was approaching

the gap from the inside, and when the second signal was given by the *Defiance*, was from 100 to 200 feet from the entrance. She did not stop, and there was a collision between the tows in passing in the gap, without fault in navigation on the part of the *Defiance*. Held, that the *Defiance* was the privileged vessel, entitled to the right of way, and the *Dayton* was alone in fault for the collision, in failing to observe the signals, and to keep inside until the *Defiance* had passed through the gap. The *Defiance* and the *Edwin Dayton*, 92 Fed. Rep. (U. S.) 521.

Seamen—Penalty for Detaining Clothing.—A criminal information will not lie for the violation of 28 Stat. 667, c. 97, which exempts the clothing of a seaman from attachment, and provides that any person who detains such clothing when demanded by the owner shall be liable to a penalty, as a penalty imposed by an act of Congress is a debt, to be recovered by a civil action, and for which, in a state where imprisonment for debt has been abolished, imprisonment by a federal court is prohibited by Rev. Stat. Sec. 990, United States vs. *Younger*, 92 Fed. Rep. (U. S.) 672.

Management of Ship—Repairs in Port of Distress.—When a ship is obliged, during a voyage, to put into a foreign port for repairs, owing to injuries received in a storm, an error of judgment of the master as to the extent of repairs necessary, where he exercises diligence and care, and acts in good faith, pertains to the management of the ship, within Sec. 3 of the Harter act (A Supp. Rev. Stat. p. 81), and does not render the owners liable for an injury to the cargo which might have been prevented had more extensive repairs been made. The *Guadeloupe*, 92 Fed. Rep. (U. S.) 670.

Management of Ship—Neglect to Open Sluices.—The opening of a sluice gate designed to empty the bilges was neglected for 20 days during heavy weather. The accumulating water overflowed the bilges, and damaged the cargo properly stowed in the hold. Held, that the neglect to open the sluices, if a fault, was one pertaining to the "management of the ship," within Sec. 3 of the Harter act, and that the ship and owners were exempted thereby from liability for the resulting damage. The *Sandfield*, 92 Fed. Rep. (U. S.) 663.

Shipping—Damage to Cargo—Seaworthiness.—A stipulation in a contract of affreightment exempting the vessel from liability for loss and damage to the cargo occasioned by any latent defects in the hull of the vessel does not extend to such as were in existence at the commencement of the voyage; nor does the provision of Sec. 3 of the Harter act, by which, if the owner has exercised due diligence to make the vessel in all respects seaworthy, neither he nor the vessel is liable for losses arising from the dangers of the sea, relieve the owner or vessel from the consequences of unseaworthiness at the inception of the voyage, though the diligence be shown. The *Sandfield*, 92 Fed. Rep. (U. S.) 663.

FROM MONTREAL TO GEORGIAN BAY.

The building of a Canadian canal from Montreal to the Georgian Bay is a project which has received the strong commendation of the present governor-general and the approval of Sir Wilfrid Laurier as being in the interests of the farmers of the New Ontario and the great northwest. The proposal is to connect the Ottawa river with French river by means of a canal, and then by dredging and improving the streams referred to, to form a complete waterways system between Montreal and the Georgian Bay. The distance from Montreal to French river is 430 miles, of which a natural waterway, 351 miles long, is found in the Ottawa river. The remaining seventy-eight miles, it is said, can be so improved that twenty-nine miles of canal only are necessary, and the estimated cost is \$17,000,000.

It is stated that a syndicate has been formed in London to support the promoters in the active operations undertaken. If the scheme goes through it is claimed that it will effect a saving of four days from Chicago to the seaboard over the Erie canal route, and of one and one-half days over the St. Lawrence route.

The advantage to be gained by such a scheme, as compared with the route through the Great Lakes, are very great. By this plan in the distance from Sault Ste. Marie to Montreal of 615 miles there are 585 miles of sheltered lake and river, and thirty miles of canal. Of the thirty miles of canal in the scheme fifteen miles are already in operation, including the Lachine canal, and the Ottawa river is navigable from Montreal to Ottawa, a distance of 110 miles. The proposal was first mooted as far back as 1847, but it is only within the past year that it has taken anything like definite shape.

SPECIALTIES IN PUMPS.

There are a number of points in the Deane steam pumps that the manufacturers make a specialty of, which include the following:

All pumps and parts of pumps are designed with utmost care and every point of advantage in simplicity of construction, certainty of action, economy of operation and durability of the machine is secured.

All parts are made to gauge and are strictly interchangeable.

All materials used are first-class and are carefully selected for the various types of pumps to best fit each for its particular service.

All workmanship is of guaranteed excellence.

Every pump is tested under steam and water pressures and is run at the factory before shipment.

Every machine is guaranteed to properly perform the work for which it is designed.

It would not be reasonable to assert that any one type of pump, single, duplex or triplex, is best adapted for every

kind of pumping. The Deane Steam Pump Co. manufacture a full assortment of sizes in each of these three types and in a great variety of designs adapted for every known class of service.

It is well for anyone requiring anything in the pump line, therefore, to write for particulars to the Deane Steam Pump Co., Holyoke, Mass.

This company reports many orders lately for pumps of various kinds, among such being orders for two large vertical ballast pumps for the new steamer which the Union Dry Dock Co., Buffalo, N. Y., has on the ways. The Deane Co. also received the order for the outfit of pumps for two large steamers which are being built for the North German Lloyd Co., at Bremen, Germany. This order includes horizontal, duplex, bilge, feed and vertical ballast pumps.

METEOROLOGY OF THE LAKES.

On Lake Superior the mean atmospheric pressure ranges from 29.28 inches in June, to 29.38 inches in January and February.

On Lake Michigan the mean atmospheric pressure ranges from 29.35 inches in May, to 29.45 inches in January and February.

On Lake Huron the mean atmospheric pressure ranges from 29.35 inches in June, to 29.45 inches in January.

On Lake Erie the mean atmospheric pressure ranges from 29.37 inches in June, to 29.47 inches in January.

On Lake Ontario the mean atmospheric pressure ranges from 29.70 inches in June, to 29.85 inches in January.

CANADIAN LAKE NAVIGATION.

The first move in the direction of constructing ships suited to the changed conditions of lake navigation in Canada, caused by the enlarging of the St. Lawrence canals, has been taken by the organization of the Canadian Inland Transportation Co., whose application for incorporation is now before the Dominion government. Among the promoters of this company are Geo. H. Bertram, president of the Bertram Engine Works, Ltd.; J. K. Osborne, vice president of the Massey-Harris Co., Ltd.; Senator Forget, president of the Richelieu & Ontario Navigation Co. The proposed capital is \$4,000,000, and the company will carry grain. For this purpose it is proposed to build ten steam barges, each of which will be capable of carrying 75,000 to 80,000 bushels of wheat, as well as to erect adequate terminal facilities in the shape of elevators, etc., at Port Colborne, Montreal, and Quebec. Pending arrangements for the completion of the organization, one steel barge of 78,000 bushels capacity will be built; in fact the work of construction has already begun at the shipyard of the Bertram Engine Works Co., Ltd.

FIRST CARGO CHICAGO WHEAT.

The first cargo of wheat mentioned in the records of Chicago was referred to in a memorial to Congress, prepared in 1841 by Thos. Hoyne, then city clerk, praying for a resumption of work on Chicago harbor. It consisted of 37 bags, or 78 bushels, of wheat, being the total wheat shipments by Chicago for the year 1838. In the memorial mentioned Mr. Hoyne said that from 1836 to 1841 there were shipped from Chicago 282,000 bushels of wheat, 50,000 barrels of pork, and flour, furs, etc., to make up a total of \$960,346, but another record (E. Colbert, in his pamphlet of 1868 on Chicago) says that only 53,756 bushels (estimated) were exported. In 1842, however, Mr. Colbert says the shipments were 586,907 bushels, the exports increasing annually up to 1848, when they reached 2,160,800 bushels, and then declined rapidly to only 477,660 bushels in 1851. The first record of corn shipments was in 1847, 67,215 bushels, but no record of corn receipts was kept until 1852, when they reached 2,991,011 bushels. Corn in 1852 sold "as low as 26 cents," Colbert says, while wheat the same year—without a Leiter—sold down to 31 cents.

MICHIGAN, A SUMMER-RESORT STATE.

No state in the Union is coming more rapidly into prominence as a healthful summer resort than the lake-locked State of Michigan; and certainly no state possesses more attractions, to tempt the summer tourist or health seeker than Michigan, with its two peninsulas, each bounded on three sides by the great inland seas, swept with the invigorating, water-cooled and purified breezes, and alive with the throbbing interests of water traffic. The great, cold Lake Superior, the largest body of fresh water on the earth, dividing the United States from the almost unexplored north, bounds the State on the north, Lake Michigan on the west, and Lakes Huron, Erie and St. Clair on the east, making this almost island state, with its hundreds of beautiful inland lakes and streams, perhaps the most attractive collection of locations for summer residence in the world.

The Michigan State Board of Health has recently issued an official publication, setting forth by photographs of views throughout the state, the facts showing the desirability of the state as a summer resort, and its value as a health resort. This publication should be of interest to many persons in the sister states on the south; and the publication sets out attractions that appeal to persons who are in pursuit of health or pleasure in the way of sailing, rowing, angling and the enjoyment of picturesque and pleasant surroundings.

The publication is a beautiful directory of Michigan's summer resort localities, with a sufficient description of localities, routes, hotels, mineral springs, mineral baths and sanatoria, offering special inducements for invalids, to make it a great convenience to persons who seek either a pleasure resort or a health resort; and as the work is official, it should be a valuable guide to the finding of a place to spend the summer months among pleasant and healthful surroundings, away from the cares of business and the enervating heat, and where the Great Lake state's immense capacity as a resort may be appreciated, and where, at slight expense, the hot summer may be pleasantly passed.

The directory contains many beautiful pictures of localities, pretty or historic spots, and marine views, making an attractive and interesting publication.

If you want this "Directory of Michigan Summer Resorts" send six cents in stamps to pay postage, with your request, and name and address, to "State Board of Health, Lansing, Michigan."

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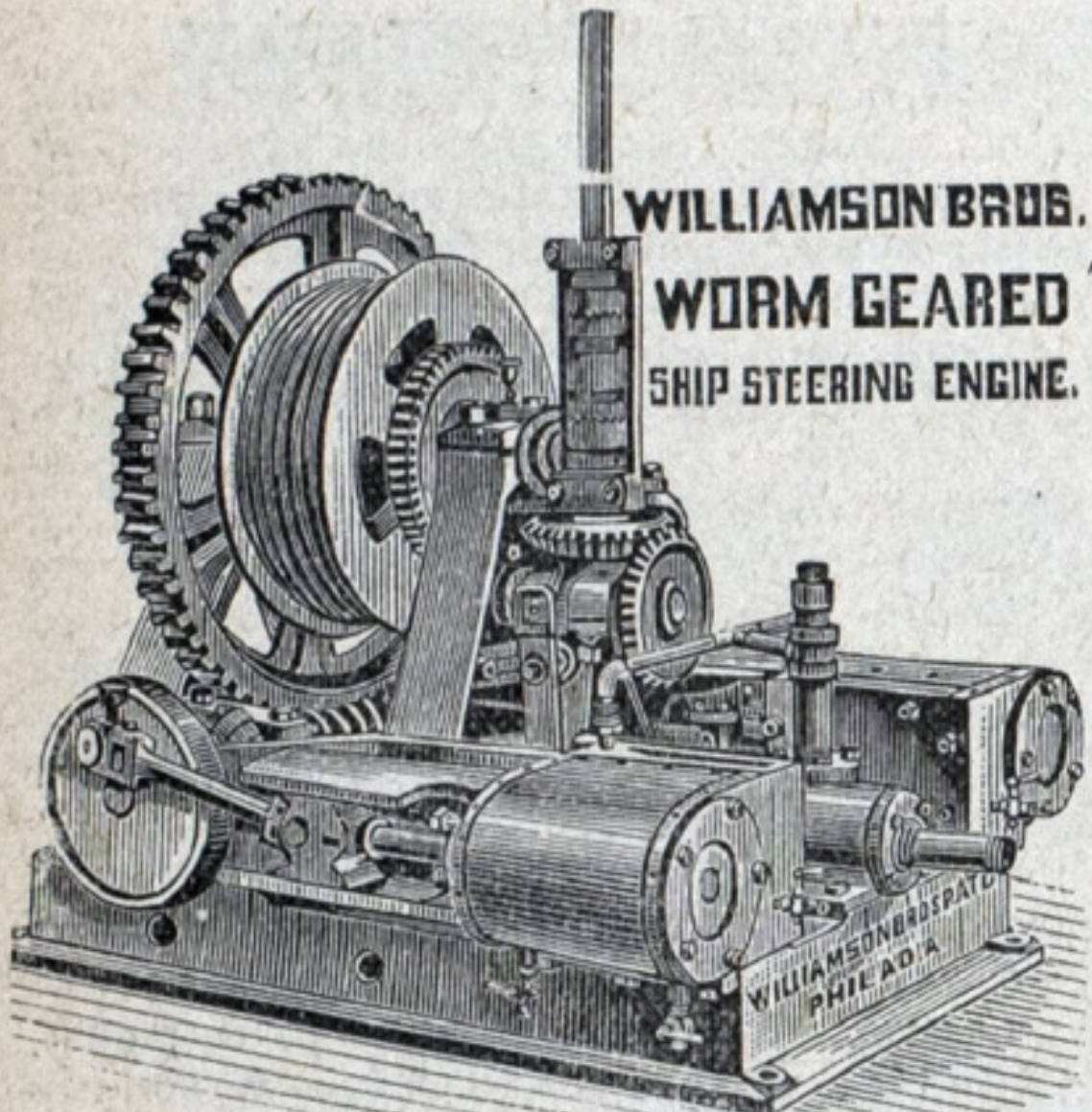
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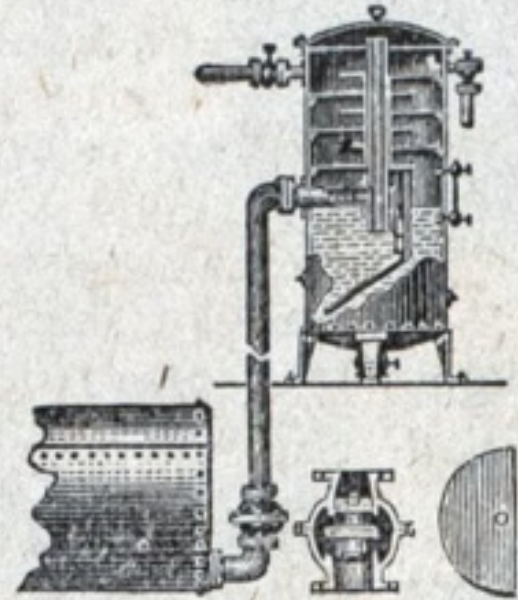
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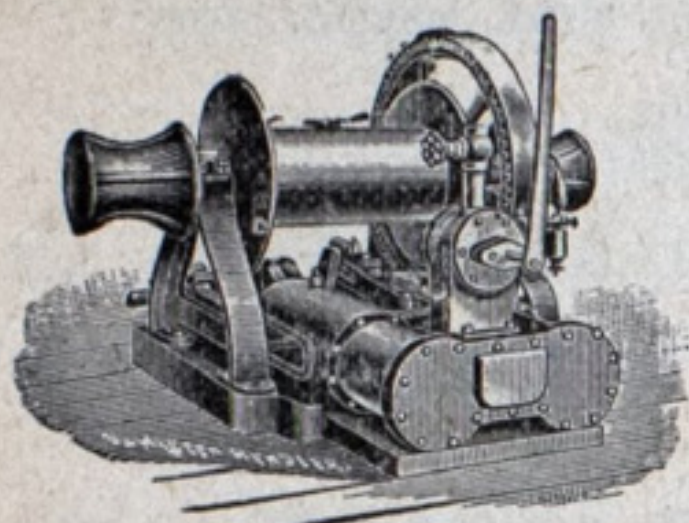
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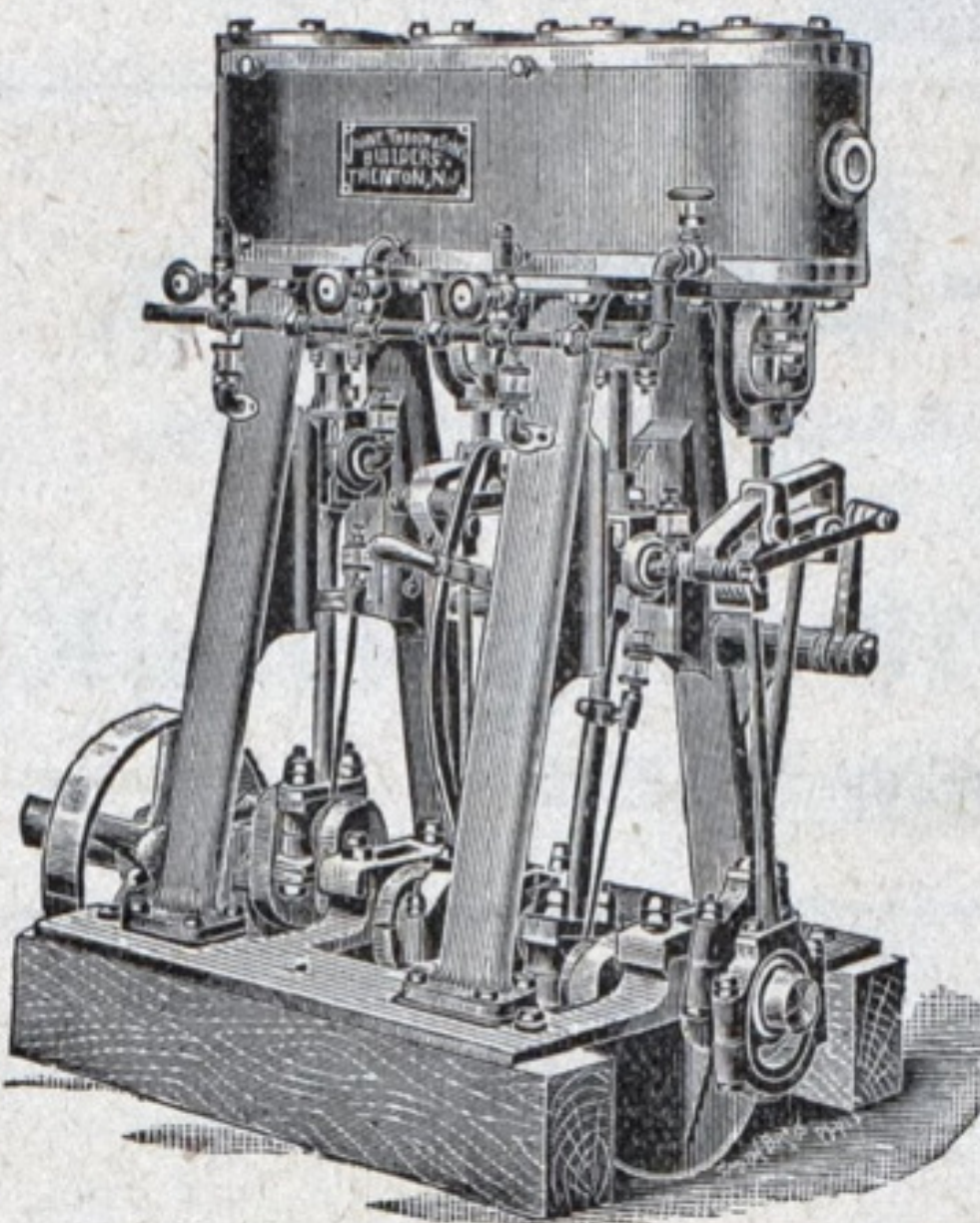
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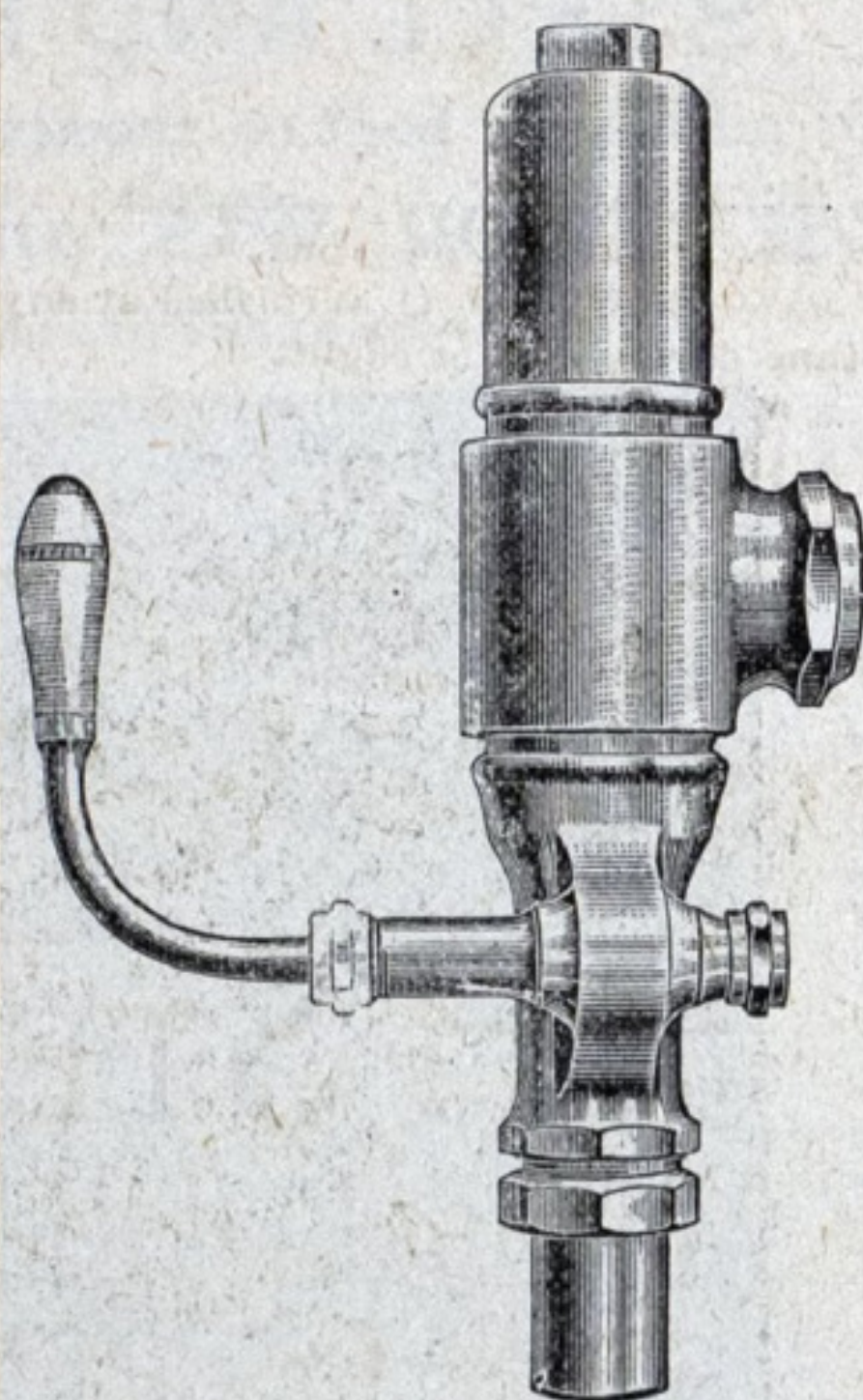
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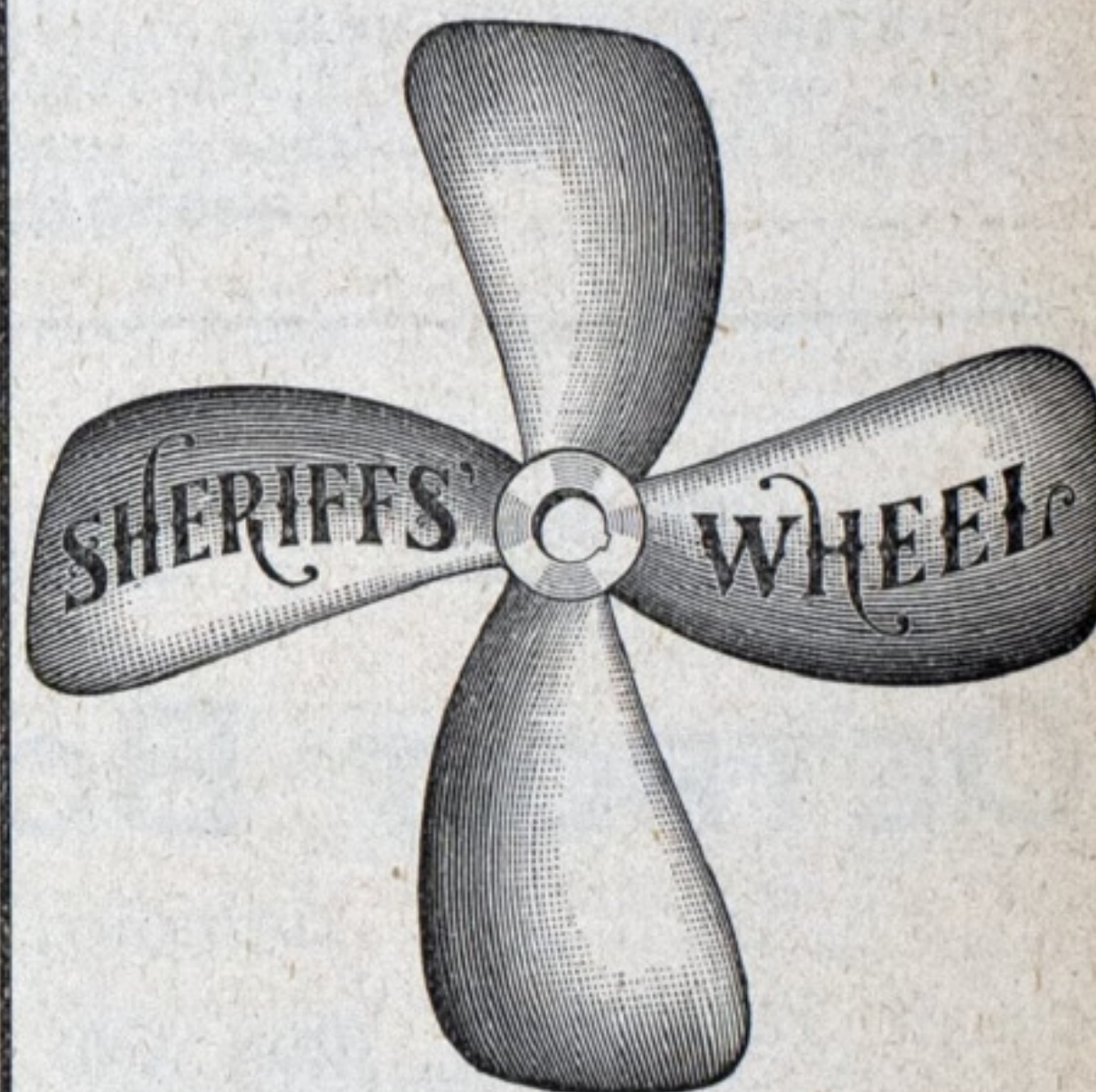
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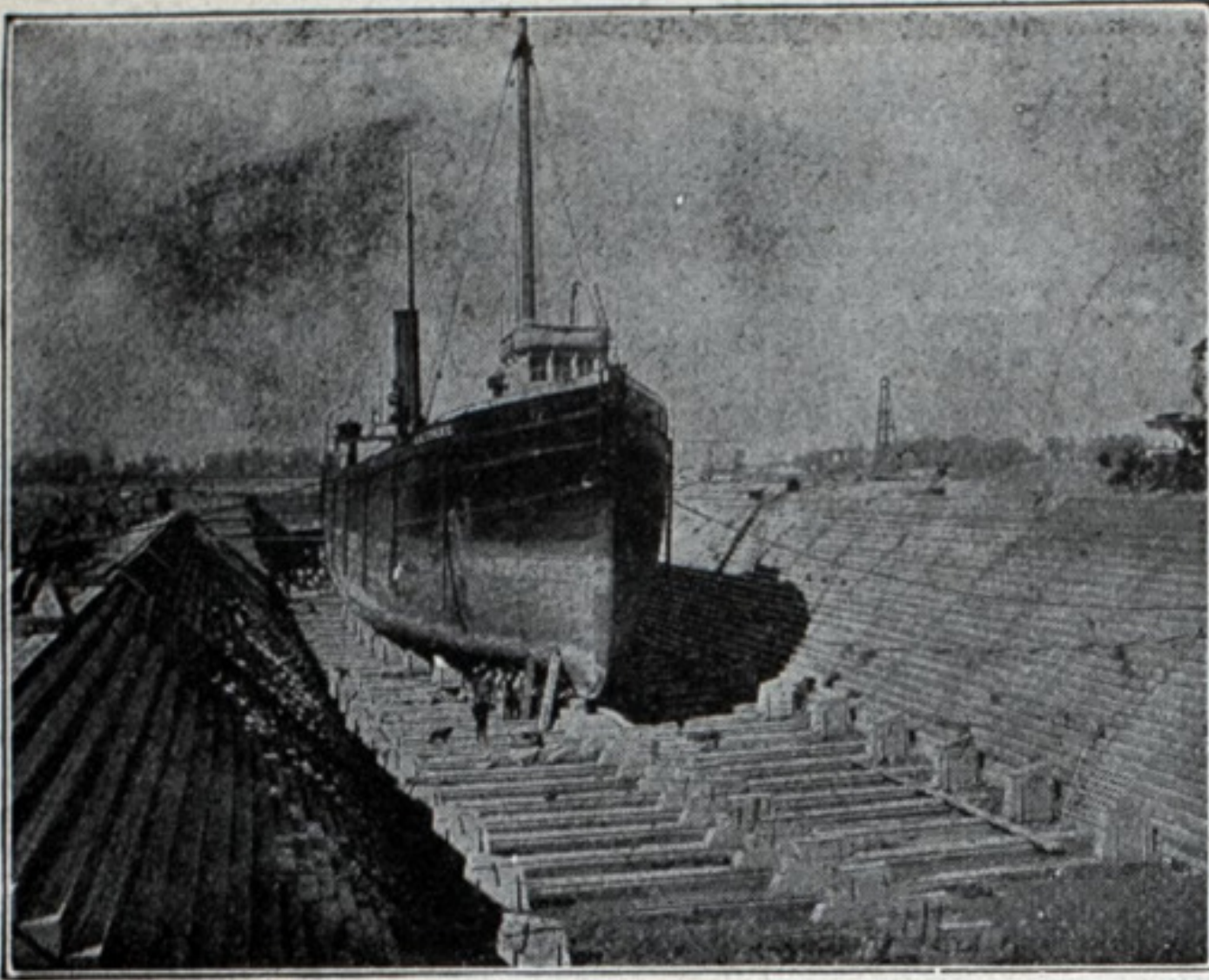
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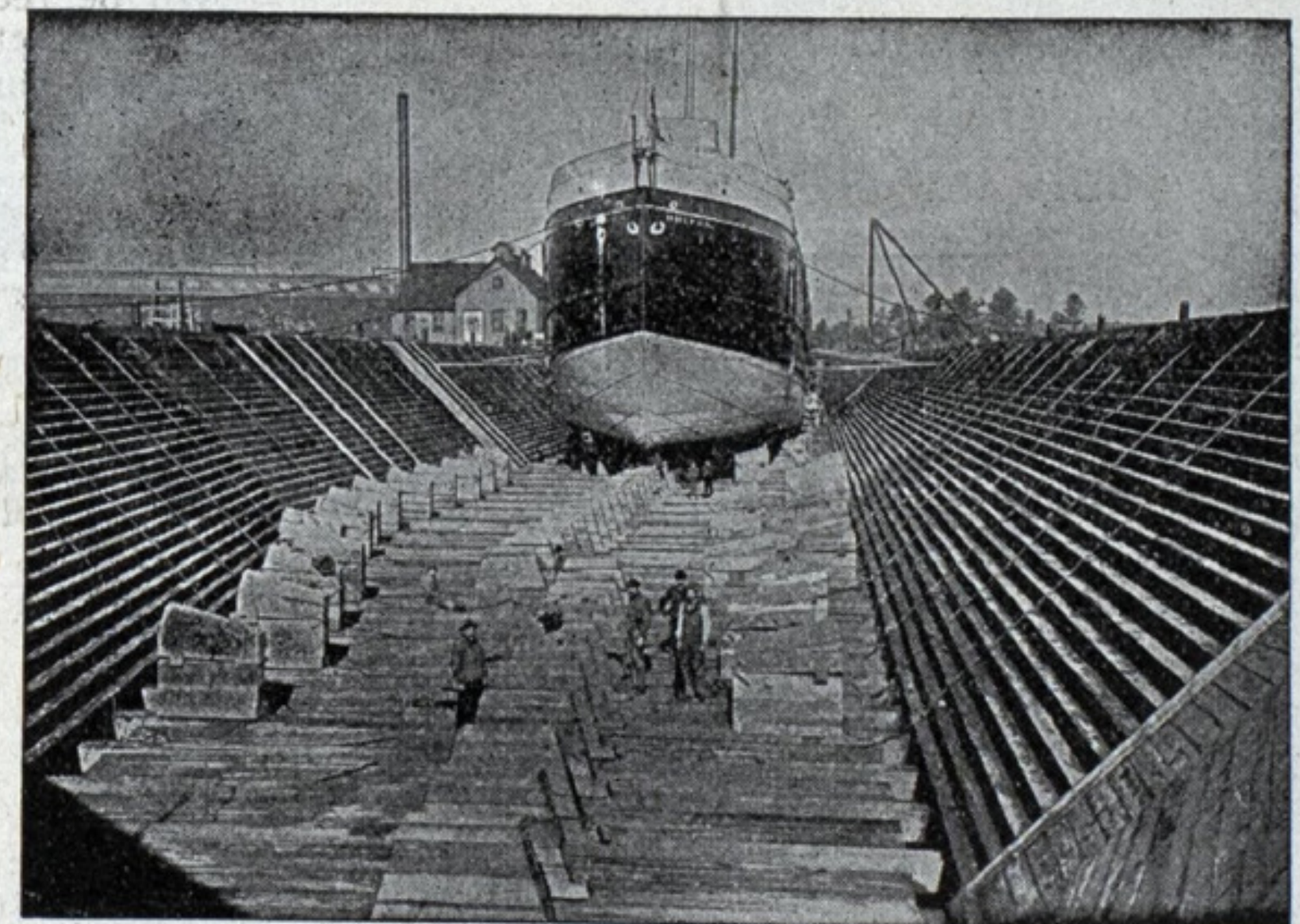
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